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EXHIBIT A

Claim Constructions To Which The Parties Have Agreed

"'002 patent"); and U.S. Patent No. 9,94	18,549 (the "'549 patent")
Claim Element	Joint Proposed Construction
"A method of routing communications in a system in which a first participant identifier is associated with a first participant registered with the system and wherein a second participant identifier is associated with a second participant, the first participant being associated with a first participant device operable to establish a communication using the system to a second participant device associated with the second participant, the system comprising at least one processor operably configured to execute program code stored in at least one memory, the method comprising"	
('762 patent claim 1)	
"A non-transitory computer readable medium encoded with program code for directing the at least one processor to execute the method of claim 14." ('762 patent claim 16)	The preamble is limiting.
"A method of routing communications in a system in which a first participant identifier is associated with a first participant registered with the system and wherein a second participant identifier is associated with a second participant, the first participant being associated with a first participant device operable to establish a communication using the system to a second participant device associated with the second participant, the system comprising at least one processor operably	

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent")			
Claim Element	Joint Proposed Construction		
configured to execute program code stored in at least one memory, the method comprising"			
('762 patent claim 21)			
"A system for routing communications in which a first participant is registered with the system and has an associated first participant identifier and wherein a second participant has an associated second participant identifier, the first participant being associated with a first participant device operable to establish a communication using the system to a second participant device associated with the second participant, the system comprising"			
('762 patent claim 25)			
"A method for routing a communication in a communication system between an Internet-connected first participant device associated with a first participant and a second participant device associated with a second participant, the method comprising"			
('330 patent claim 1)			
"An apparatus for routing communications in a communication system that includes an Internet-connected first participant device associated with a first participant, the first participant device operable to initiate a communication to a second participant device associated with a second participant, the apparatus comprising"			
('330 patent claim 12)			

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

002 patent), and 0.5.1 atent 10. 5,54	10,547 (the 547 patent)
Claim Element	Joint Proposed Construction
"A method of routing a communication in a communication system between an Internet-connected first participant device associated with a first participant and a second participant device associated with a second participant, the method comprising" ('002 patent claim 1)	The preamble is limiting.
"An apparatus for routing communications in a communication system that includes an Internet-connected first participant device associated with a first participant, the first participant device operable to initiate a communication to a second participant device associated with a second participant, the apparatus comprising" ('002 patent claim 12)	The preamble is limiting.
"A method of routing a communication in a communication system between an Internet-connected first participant device associated with a first participant and a second participant device associated with a second participant, the method comprising" ('549 patent claim 1)	The preamble is limiting.
"An apparatus for routing a communication in a communication system between an Internet-connected first participant device and a second participant device, the apparatus comprising" ('549 patent claim 17)	The preamble is limiting.

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

EXHIBIT B

Joint Disputed Claim Construction Chart

U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the "'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent")¹

	002 patent); and U.S. Fatent No. 9,946	5,549 (the 549 patent)	
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
"system" ('762 patent claims 1, 14, 21, 25, 26, 30; '330 patent claims 1, 3, 12, 13; '002 patent claims 1, 12, 22; '549 patent claims 1, 2, 6, 9, 17, 18)	Plain and ordinary meaning. For example: a set of things working together	See '762 Patent Claims 1, 9, 14, 19, 20-2, 25-45. See '330 Patent Claims 1- 3, 8, 12, 13, 16-8, 21, 22, 26-8, 31. See '549 Patent Claims 1- 7, 9, 10, 14-21, 23, 25-7, 29. See '002 Patent Claims 1, 2, 5, 7-13, 16, 17, 22, 24, 25, 30. See Fig. 1. Summary of the Invention: • "In accordance with one aspect of the invention, there is	Indefinite	Fig. 1; 1:21-28 ("Referring to FIG. 1, a system for making voice over IP telephone/videophone calls is shown generally at 10. The system includes a first supernode shown generally at 11 and a second supernode shown generally at 21. The first supernode 11 is located in a geographical area, such as Vancouver, B.C., Canada for example and the second supernode 21 is located in London, England, for example.

¹ All citations are to the '762 patent unless otherwise noted.

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		provided a process for operating a call routing controller to facilitate communication between callers and callees in a system comprising a plurality of nodes with which callers and callees are associated. '762 Patent at col. 1 ll. 57- 61. • "In accordance with		Different supernodes may be located in different geographical regions throughout the world to provide telephone/videophone service to subscribers in respective regions. These supernodes may be in communication with each other by high speed/high data throughput links including optical fiber,
		another aspect of the invention, there is provided a data structure for access by an apparatus for producing a routing message for use by a call routing controller in a communications system." '762 at col. 6 ll. 16-19. Brief Description of the Drawings:		satellite and/or cable links, forming a backbone to the system. These supernodes may alternatively or, in addition, be in communication with each other through conventional internet services."); 1:58-62; 3:62-4:11; 13:20-35; 13:55-66; 14:18-50; 14:65-15:9; 17:58-63; 19:1-4; 19:36-48; 20:5-11;

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	"'002 patent	t"); and U.S. Patent No. 9,948	,549 (the "'549 patent") ¹	
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		• "FIG. 1 is a block		21:1-12 ("the callee is a
		diagram of a system		subscriber to the system
		according to a first		and the call is classified as
		embodiment of the		a private network call by
		invention;" '762 Patent		directing the processor to
		at col. 11 ll. 9-10.		block 279 which directs
		Detailed Description:		the processor to copy the contents of the
		• "Referring to FIG. 1, a		corresponding user name
		system for making		field (281 in FIG. 14) from
		voice over IP		the callee DID bank table
		telephone/videophone		record 300 in FIG. 14) into
		calls is shown		the callee ID buffer
		generally at 10. The		(211 in FIG. 7).");
		system includes a first		
		supernode shown		23:23-38; 25:51-61; 32:34-
		generally at 11 and a		39 ("Referring back
		second supernode		to FIG. 41, if at
		shown generally at		block 782 a record such as
		21 These		the one shown in FIG. 43is
		supernodes may be in		located in the system
		communication with		operator special rates table,
		each other by high		the processor is directed to
		speed/high data		block 800 in FIG. 41. If
		throughput links		such a record is not found
		including optical fiber,		in the system operator
		satellite and/or cable		special rates table,

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		links, forming a		block 802 directs the
		backbone to the		processor to address the
		system." '762 Patent		database 18 to look in a
		at col. 13 ll. 20-32.		system operator mark-up
		• "An exemplary caller		table for a mark-up record
		profile for the		associated with the
		Vancouver subscriber		reseller.").
		is shown generally at		
		276 in FIG. 10 and		Plaintiff's Opposition to
		indicates that the user		Defendants' Motion to
		name field 258		Dismiss (Dkt. No. 68) at 3
		includes the user name		("an external
		(2001 1050 8667) that		communication network
		has been assigned to		(e.g., the public switched
		the subscriber and is		telephone networks or
		stored in the user name		"PSTN")"); id. at 2 ("such
		field 50 in the		as a system or internal
		telephone as shown in		network (e.g., voice-over
		FIG. 2.		IP) and an external
				network (e.g., a "circuit
		Referring back to FIG.		switched network" or
		10, the domain field		public telephone
		260 includes a domain		communication network
		name as shown at 282,		('PTSN'))"); <i>id.</i> at 12
		including a node type		("Internal routing in an IP
		identifier 284, a		network may rely on one
		location code identifier		or more communication

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		286, a system provider		nodes, whereas external
		identifier 288 and a		destinations (e.g., on the
		domain portion 290.		PSTN) may only be
		The domain field 260		accessible through a
		effectively identifies a		gateway."); id. at 14
		domain or node		("system network (e.g.,
		associated with the		VoIP) or an external
		user identified by the		network (e.g., a PSTN
		contents of the user		interconnected through a
		name field 258.		gateway)"); id. at 15
		name neid 256.		(same).
		In this embodiment,		(surie).
		the node type		
		identifier 284 includes		
		the code "sp"		
		identifying a		
		supernode and the		
		location identifier 286		
		identifies the		
		supernode as being in		
		Vancouver (YVR).		
		The system provider		
		identifier 288		
		identifies the company		
		supplying the service		
		and the domain		
		portion 290 identifies		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		the "com" domain." 762' Patent at col. 18 1. 59 – col. 19 1. 4. "A dialing profile of the type shown in FIG. 9 is produced whenever a user registers with the system or agrees to become a subscriber to the system. Thus, for example, a user wishing to subscribe to the system may contact an office maintained by a system operator and personnel in the office may ask the user certain questions about his location and service preferences, whereupon tables can be used to provide office personnel with appropriate information to be		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		entered into the user		
		name 258, domain		
		260, NDD 262, IDD		
		264, country code 266,		
		local area codes 267,		
		caller minimum and		
		maximum local length		
		fields 268 and 270,		
		reseller field 273 and		
		concurrent call fields		
		275 and 277 to		
		establish a dialing		
		profile for the user.		
		Referring to FIGS. 11		
		and 12, callee dialing		
		profiles for users in		
		Calgary and London,		
		respectively for		
		example, are shown.		
		In addition to creating		
		dialing profiles when a		
		user registers with the		
		system, a direct-in-		
		dial (DID) record of		
		the type shown at 278		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		in FIG. 13 is added to		
		a direct-in-dial bank		
		table in the database		
		(18 in FIG. 1) to		
		associate the user		
		name and a host name		
		of the supernode with		
		which the user is		
		associated, with an		
		E.164 number		
		associated with the		
		user on the PSTN		
		network." 762' Patent		
		at col. 19 ll. 38-60.		
		Extrinsic evidence includes		
		expected expert testimony.		
		An expert is expected to		
		offer the following		
		opinions, based on their		
		expertise, background and		
		experience in the field of		
		electrical engineering,		
		knowledge of the		
		viewpoint of a person of		
		ordinary skill in the art,		
		review of the patents and		
		file histories, and review of		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		the proposed constructions above:		
		1. One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related discipline. Such a person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work experience.		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		2. A person of ordinary skill in the art would have understood the claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction.		
		Extrinsic Evidence:		
		McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 2092).		
		Webster's II New College Dictionary, 2005 (at p. 1146).		
		"system, n." OED Online, Oxford University Press, 2019.		
"participant	stored information specific	See '762 Patent Claims 1,	Plain and ordinary	2:6-16 ("The process may

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
1	o a subscriber of a communication system	3, 7-8, 11, 20-1, 24-5, 27, 31, 35, 42-3, 45. See '330 Patent Claims 9-10, 19. See '549 Patent Claims 1, 4, 10, 12 14, 17-8, 25-8, 30-1. See '002 Patent Claims 1, 4-7, 9, 11, 12,15, 16, 22, 25, 29. See Figs 9-12. Summary of the Invention: • "Locating a record may involve locating a caller dialing profile comprising a user name associated with the caller, a domain associated with the caller, and at least one calling attribute. Using the call classification criteria may involve comparing calling	meaning, i.e., a record specific to the respective [user/participant]	involve receiving a request to establish a call, from a call controller in communication with a caller identified by the callee identifier. Using the call classification criteria may involve searching a database to locate a record identifying calling attributes associated with a caller identified by the caller identifier. Locating a record may involve locating a caller dialing profile comprising a user name associated with the caller, a domain associated with the caller, and at least one calling attribute."). 18:27-39 ("Referring to FIG. 8A, the RC request

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		attributes associated with the caller dialing profile with aspects of the callee identifier." '762 Patent at col. 2 ll. 13-16. • "Formatting may involve removing an international dialing digit from the callee identifier, when the callee identifier begins with a digit matching an international dialing digit specified by the caller dialing profile associated with the caller." '762 Patent at col. 2, ll. 36-40. • "Formatting may involve prepending a caller country code and an area code to the callee identifier when the callee identifier has a length that matches a		message handler begins with a first block 252 that directs the RC processor circuit (200) to store the contents of the RC request message (150) in buffers in the buffer memory 207 of FIG. 7, one of which includes the caller ID buffer 209 of FIG. 7 for separately storing the contents of the callee field 154 of the RC request message. Block 254 then directs the RC processor circuit to use the contents of the caller field 152 in the RC 35 request message shown in FIG. 6, to locate and retrieve from the database 18 a record associating calling attributes with the calling subscriber. The located record may be referred to as a dialing profile for the caller. The retrieved

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		caller dialing number format specified by the caller dialing profile and only one area code is specified as being associated with the caller in the caller dialing profile." '762 Patent at col. 2, ll. 49-54. • "The process may involve determining whether the callee identifier complies with a pre-defined user name format and if so, classifying the call as a private network call." '002 Patent at col. 2 ll. 58-60.		dialing profile may then be stored in the buffer memory 207, for example."). Figs. 8A; 9-12.
		"Producing the routing message identifying a node on the private network may involve setting a callee identifier in response to		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		a user name associated with the DID bank table record." '002 Patent at col. 3 ll. 1-4.		
		• "Determining whether a node associated with the reformatted callee identifier is the same as a node associated the caller identifier may involve determining whether a prefix of the re-formatted callee identifier matches a corresponding prefix of a username associated with the caller dialing profile." '002 Patent at col. 3, ll. 9-14.		
		"The process may involve causing the dialing profile to include a maximum concurrent call value and a concurrent call count value and causing		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed	VoIP-Pal's Evidence	Defendants' Proposed	Defendants' Evidence
	Construction	the concurrent call count value to be incremented when the user associated with the dialing profile initiates a call and causing the concurrent call count value to be decremented when a call with the user associated with the dialing profile is ended." '762 Patent at col. 3 ll. 54-60. • "In accordance with another aspect of the invention, there is provided a data structure for access by an apparatus for producing a routing message for use by a call routing controller in a communications system. The data	Construction	
		structure includes dialing profile records		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		comprising fields for		
		associating with		
		respective subscribers		
		to the system, a		
		subscriber user name,		
		direct-in-dial records		
		comprising fields for		
		associating with		
		respective subscriber		
		usernames, a user		
		domain and a direct-in-		
		dial number, prefix to		
		node records		
		comprising fields for		
		associating with at least		
		a portion of the		
		respective subscriber		
		user names, a node		
		address of a node in the		
		system, whereby a		
		subscriber name can be		
		used to find a user		
		domain, at least a		
		portion of the a		
		subscriber name can be		
		used to find a node with		
		which the subscriber		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		identified by the subscriber name is associated, and a user domain and subscriber name can be located in response to a direct-indial number." '002 Patent at col. 6 ll. 16-32. • "In accordance with another aspect of the invention, there is provided a method for determining a time to permit a communication session to be conducted. The method involves calculating a cost per unit time, calculating a first time value as a sum of a free time attributed to a participant in the communication session and the quotient of a funds balance held by		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		the participant to the cost per unit time value and producing a second time value in response to the first time value and a billing pattern associated with the participant , the billing pattern including first and second billing intervals and the second time value being the time to permit a communication session to be conducted.		
		Calculating the first time value may involve retrieving a record associated with the participant and obtaining from the record at least one of the free time and the funds balance." '762 Patent at col. 6 ll. 48-62 • "In accordance with		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the	e
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹	

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		another aspect of the		
		invention, there is		
		provided a process for		
		attributing charges for		
		communications		
		services. The process		
		involves determining a		
		first chargeable time in		
		response to a		
		communication session		
		time and a pre-defined		
		billing pattern,		
		determining a user cost		
		value in response to the		
		first chargeable time		
		and a free time value		
		associated with a user		
		of the communications		
		services, changing an		
		account balance		
		associated with the user		
		in response to a user		
		cost per unit time. The		
		process may further		
		involve changing an		
		account balance		
		associated with a		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		reseller of the communications services in response to a reseller cost per unit time and the communication session time and changing an account balance associated with an operator of the communications services in response to an operator cost per unit time and the communication session time." '002 Patent at col. 8 ll. 43-58		
		 Brief Description of Drawings: "FIG. 9 is a tabular representation of a dialing profile stored in a database accessible by the RC shown in FIG. 		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the	e
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹	

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
		 FIG. 10 is a tabular representation of a dialing profile for a caller using the caller telephone shown in FIG. 1; FIG. 11 is a tabular representation of a callee profile for a callee located in Calgary; FIG. 12 is a tabular representation of a callee profile for a callee profile for a callee profile for a callee located in London;" 762 Patent at col. 11, 11. 30-7. 				
		 Detailed Description: "Referring to FIG. 8A, the RC request message handler begins with a first block 252 that 				

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		directs the RC		
		processor circuit (200)		
		to store the contents of		
		the RC request message		
		(150) in buffers in the		
		buffer memory 207 of		
		FIG. 7, one of which		
		includes the caller ID		
		buffer 209 of FIG. 7 for		
		separately storing the		
		contents of the callee		
		field 154 of the RC		
		request message. Block		
		254 then directs the RC		
		processor circuit to use		
		the contents of the		
		caller field 152 in the		
		RC request message		
		shown in FIG. 6, to		
		locate and retrieve from		
		the database 18 a record		
		associating calling		
		attributes with the		
		calling subscriber. The		
		located record may be		
		referred to as a dialing		
		profile for the caller.		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		The retrieved dialing profile may then be stored in the buffer memory 207, for example.		
		Referring to FIG. 9, an exemplary data structure for a dialing profile is shown generally at 253 and includes a user name field 258, a domain field 260, and calling attributes comprising a national dialing digits (NDD) field 262, an international dialing digits (IDD) field 264, a country code field 266, a local area codes field 267, a caller minimum local length field 268, a		
		caller maximum local length field 270, a reseller field 273, a maximum number of concurrent calls field		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		275 and acurrent		
		number of concurrent		
		calls field 277.		
		Effectively the dialing		
		profile is a record		
		identifying calling		
		attributes of the caller		
		identified by the caller		
		identifier. More		
		generally, dialing		
		profiles represent		
		calling attributes of		
		respective subscribers.		
		An exemplary caller		
		profile for the		
		Vancouver subscriber is		
		shown generally at 276		
		in FIG. 10 and indicates		
		that the user name field		
		258 includes the user		
		name (2001 1050 8667)		
		that has been assigned		
		to the subscriber and is		
		stored in the user name		
		field 50 in the		
		telephone as shown in		
		FIG. 2." '762 Patent at		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		col. 18 ll. 27-58.		
		• "A dialing profile of the type shown in FIG. 9 is produced whenever a user registers with the system or agrees to become a subscriber to the system. Thus, for example, a user wishing to subscribe to the system may contact an office maintained by a system operator and personnel in the office may ask the user certain questions about his location and service preferences, whereupon tables can be used to provide office personnel with appropriate information to be entered into the		
		user name 258, domain 260, NDD 262, IDD		
		264, country code 266,		
		local area codes 267,		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		caller minimum and maximum local length fields 268 and 270, reseller field 273 and concurrent call fields 275 and 277 to establish a dialing profile for the user ." '762 Patent at col. 19 ll. 38-50.		
		• "The parameter memory 38 has a username field 50, a password field 52 an IP address field 53 and a SIP proxy address field 54, for example. The user name field 50 is operable to hold a user name, which in this case is 2001 1050 8667. The user name is assigned upon subscription or registration into the system and, in this embodiment, includes a		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		twelve digit number		
		having a continent code		
		61, a country code 63, a		
		dealer code 70 and a		
		unique number code 74.		
		The continent code 61		
		is comprised of the first		
		or left-most digit of the		
		user name in this		
		embodiment. The		
		country code 63 is		
		comprised of the next		
		three digits. The dealer		
		code 70 is comprised of		
		the next four digits and		
		the unique number code		
		74 is comprised of the		
		last four digits. The		
		password field 52 holds		
		a password of up to 512		
		characters, in this		
		example. The IP		
		address field 53 stores		
		an IP address of the		
		telephone, which for		
		this explanation is		
		192.168.0.20. The SIP		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		proxy address field 54 holds an IP protocol compatible proxy address which may be provided to the telephone through the internet connection 48 as part of a registration procedure." '002 Patent at col. 15 ll. 48-67.		
		Extrinsic evidence includes expected expert testimony. An expert is expected to offer the following opinions, based on their expertise, background and experience in the field of electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of the proposed constructions above:		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

1. One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related discipline. Such a person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some	laim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
greater degree of formal education could serve to replace some degree of professional work experience. 2. A person of ordinary skill in the art would			the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related discipline. Such a person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work experience. 2. A person of ordinary		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction.		
		Extrinsic Evidence: McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 2235).		
		Webster's II New College Dictionary, 2005 (at p. 820).		
		"profile, n." OED Online, Oxford University Press, 2019.		
		"user, n.1." OED Online, Oxford University Press, 2019.		

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	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹						
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence			
"attribute" ('762 patent claims 1, 2, 21, 25, 26, 30; '330 patent claims 1, 4, 12; '002 patent claims 1, 12; '549 patent claims 1, 11, 12, 17)	information that is part of stored information specific to a subscriber of a communication system	See '762 Patent Claims 1-3, 7, 11, 20-1, 24-7, 30, 35, 43, 45. See '330 Patent Claims 1, 4, 9, 10, 12, 17, 19. See '549 Patent Claims 1, 10-4, 17, 26-8. See '002 Patent Claims 1, 9, 11-2, 18, 21, 27. See Fig. 9. Summary of the Invention • "Using the call classification criteria may involve searching a database to locate a record identifying calling attributes associated with a caller identified by the caller identifier. Locating a record may involve locating a caller	Plain and ordinary meaning, i.e., characteristic specific to the respective [user/participant]	2:9-19 ("Using the call classification criteria may involve searching a database to locate a record identifying calling attributes associated with a caller identified by the caller identifier. Locating a record may involve locating a caller dialing profile comprising a user name associated with the caller, a domain associated with the caller, and at least one calling attribute. Using the call classification criteria may involve comparing calling attributes associated with the caller dialing profile with aspects of the callee identifier.");			
		invoive locating a caller		4:13-19 ("The apparatus			

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	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
		dialing profile		may further include		
		comprising a user name		searching provisions for		
		associated with the		searching a database		
		caller, a domain		including records		
		associated with the		associating calling		
		caller, and at least one		attributes with subscribers		
		calling attribute .		to the private network to		
		Using the call		locate a record identifying		
		classification criteria		calling attributes		
		may involve comparing		associated with a caller		
		calling attributes		identified by the caller		
		associated with the		identifier.");		
		caller dialing profile		Figs. 9-14.		
		with aspects of the		Figs. 9-14.		
		callee identifier.		18:40-52 ("Referring to		
		Comparing may		FIG. 9, an exemplary data		
		involve determining		structure for a dialing		
		whether the callee		profile is shown generally		
		identifier includes a		at 253 and includes a user		
		portion that matches an		name field 258, a domain		
		IDD associated with the		field 260, and calling		
		caller dialing profile.		attributes comprising a		
				national dialing digits		
		Comparing may		(NDD) field 262, an		
		involve determining		international dialing digits		
		whether the callee		(IDD) field 264, a country		
		identifier includes a		(1DD) Held 204, a couldry		

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	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
		portion that matches an NDD associated with the caller dialing profile. Comparing may involve determining whether the callee identifier includes a portion that matches an area code associated with the caller dialing profile. Comparing may involve determining whether the callee identifier has a length within a range specified in the caller dialing profile." '762 Patent at col. 2 ll. 9-32. "The apparatus may further include searching provisions for searching a database including records associating calling		code field 266, a local area codes field 267, a caller minimum local length field 268, a caller maximum local length field 270, a reseller field 273, a maximum number of concurrent calls field 275 and a current number of concurrent calls field 277. Effectively the dialing profile is a record identifying calling attributes of the caller identifier. More generally, dialing profiles represent calling attributes of respective subscribers."); '330 4/10/17 Amendment and Remarks at 11-12. ("As explained above, Turner's Directory Server uses the dialed CA of the called party (which the Examiner believes is a		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		attributes with subscribers to the private network to locate a record identifying calling attributes associated with a caller identified by the caller identifier. The records may include dialing profiles each including a user name associated with the subscriber, an identification of a domain associated with the subscriber, and an identification of at least one calling attribute associated with the subscriber. The call classification provisions may be operably configured to compare calling attributes associated with the caller dialing		"second participant") as a search key to obtain the current NA attribute 122 from the "user profile" object 104. See Turner at [0041]-[0042] and in Figure 3. Thus, at best, Turner compares the first participant station's NA with a second participant attribute (an NA taken from the second participant's user profile). However, Claim 1 specifically recites, "comparing at least a portion of the second participant identifier with at least one of the plurality of first participant attributes" [i.e., located in the "user profile for the first participant"]. Thus, Turner's decision as to whether the calling party and the called party belong to the same gateway is

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
	Construction	profile with aspects of the callee identifier. The calling attributes may include an international dialing digit and call classification provisions may be operably configured to determine whether the callee identifier includes a portion that matches an IDD associated with the caller dialing profile. The calling attributes may include a national dialing digit and the call classification provisions may be operably configured to determine whether the callee identifier includes a portion that matches an NDD associated with the	Construction	based on a different criterion than in Claim 1, and for at least this reason, Turner fails to anticipate Claim 1."); Mangione-Smith Decl. In Opposition to Defendants' Motion to Dismiss ("To be clear, it is not a calling party's identifier (i.e., "caller ID" or "caller identifier") that is used as the basis for evaluating the called party's identifier (e.g., "callee identifier"); rather, the calling party's identifier is used to locate a caller-specific profile identifying calling party attributes to be used to evaluate the called party's identifier and to determine the routing destination, as between two networks, and to engage infrastructure for

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		The calling attributes may include an area code and the call classification provisions may be operably configured to determine whether the callee identifier includes a portion that matches an area code associated with the caller dialing profile. The calling attribute may include a number length range and the call classification provisions may be operably configured to determine whether the callee identifier has a length within a number length range specified in the caller dialing profile. '762 Patent at		communication.").
		col. 4 ll. 15-47. Detailed Description:		

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	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹						
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence			
		• "Referring to FIG. 9, an exemplary data structure for a dialing profile is shown generally at 253 and includes a user name field 258, a domain field 260, and calling attributes comprising a national dialing digits (NDD) field 262, an international dialing digits (IDD) field 264, a country code field 266, a local area codes field 267, a caller minimum local length field 268, a caller maximum local length field 270, a reseller field 273, a maximum number of concurrent calls field 275 and a current number of concurrent calls field 277" '762 Patent at col. 18 ll. 40-9.					

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Extrinsic evidence includes expected expert testimony. An expert is expected to offer the following opinions, based on their expertise, background and experience in the field of electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of the proposed constructions above: 1. One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work experience. 2. A person of ordinary skill in the art would have understood the claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction.		

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		"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence			
"routing message" con relactions 1, 21, 25.	-	See '762 Patent Claims 1, 9, 10, 21-2, 25, 32-33, 43-4. See '330 Patent Claims 1, 2, 8, 11-2, 16-7, 22, 27. See '549 Patent Claims 1-3, 10, 12, 14, 17-9, 26-8. See '002 Patent Claims 1, 2, 8-13, 17, 19, 22-3. See Figs. 15, 16, 25, 32. '762 Patent at Col. 1 Il. 29-35. Summary of the Invention: • "In accordance with one aspect of the invention, there is provided a process for operating a call routing controller to facilitate communication		Fig. 7; Fig. 8A; Fig. 8C; Fig. 8D; Fig. 15; Fig. 16; Fig. 17; Fig. 25; Fig. 32; 21:49-62 ("Referring to FIG. 15, a generic routing message is shown generally at 352 and includes an optional supplier prefix field 354, and optional delimiter field 356, a callee user name field 358, at least one route field 360, a time to live field 362 and other fields 364The route field 360 holds a domain name or IP address of a gateway or node that is to carry the call"); '005 5/15/15 Reply to Non-Final Office Action at			

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		comprising a plurality		how/which way to forward
		of nodes with which		packets with payload.");
		callers and callees are		
		associated. The process		1:57-2:5; 3:1-53; 3:61-
		involves, in response to		4:10; 5:18-6:47; 11:45-50;
		initiation of a call by a		12:1-4; 12:19-21; 14:51-
		calling subscriber,		15:9; 16:51-17:15; 18:7-
		receiving a caller		25; 21:12-48; 21:63-22:4;
		identifier and a callee		25:13-64; 26:20-35; 26:51-
		identifier. The process		28:43.
		also involves using call		
		classification criteria		'005 5/15/15 Reply to
		associated with the		Non-Final Office Action at
		caller identifier to		27 ("There is nothing to
		classify the call as a		suggest that this signal or
		public network call or a		signaling is a routing
		private network call.		message in the sense one
		The process further		skilled in the art would
		involves producing a		understand this term");
		routing message		
		identifying an address,		'005 5/15/15 Reply to
		on the private network,		Non-Final Office Action at
		associated with the		28 ("[A]s clearly stated in
		callee when the call is		Alexander, the router only
		classified as a private		forwards data packets, not
		network call. The		routing messages");
		process also involves		

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	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹						
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence			
		producing a routing message identifying a gateway to the public network when the call is classified as a public network call." '762 Patent at col. 1-2, ll. 57-5. • "Producing the routing message identifying a node on the private network may involve setting a callee identifier in response to a user name associated with the DID bank table record." '762 Patent at col. 3, ll. 1-4. • "Producing the routing message may involve determining whether a node associated with the reformatted callee identifier is the same as a node associated the caller identifier." '762		Plaintiff's Opposition to Defendants' Motion to Dismiss (Dkt. No. 68) at 15 ("Routing message identifies a suitable system network "node" or a gateway (e.g., a gateway to the PSTN)"); Newton's Telecommunications Dictionary 21st Edition at 527 (defining "message" as "a sequence of characters used to convey information or data.").			

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Patent at col. l. 57 1-col. 2 l. 5.		
		• "When the node associated with the caller is not the same as the node associated with the callee, the process involves producing a routing message including the caller identifier, the reformatted callee identifier and an identification of a private network node associated with the callee and communicating the routing message to a call controller." '762 Patent at col. 3 ll. 5-7.		
		"When the node associated with the caller is the same as the node associated with the callee, the process		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		involves determining whether to perform at least one of the following: forward the call to another party, block the call and direct the caller to a voicemail server associated with the callee." '762 Patent at col. 3 ll. 14-19.		
		• "Producing the routing message may involve producing a routing message having an identification of at least one of the callee identifier, an identification of a party to whom the call should be forwarded and an identification of a voicemail server associated with the callee." '762 Patent at col. 3 ll. 20-25.		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		 "The process may involve communicating the routing message to a call controller." '762 Patent at col. 3, ll. 31-32. "Producing a routing 		
		message identifying a gateway to the public network may involve searching a database of route records associating route		
		identifiers with dialing codes to find a route record having a dialing code having a number pattern matching at least a portion of the		
		reformatted callee identifier." '762 Patent at col. 3, ll. 33-38. • "The process may		
		involve loading a routing message buffer with the		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		reformatted callee identifier and an identification of specific routes associated respective ones of the supplier records associated with the route record and loading the routing message buffer with a time value and a timeout value." '762 Patent at col. 3 ll. 45-50. • "The process may involve communicating a routing message involving the contents of the routing message buffer to a call controller." '762 Patent at col. 3 ll. 51-53. • "In accordance with another aspect of the invention, there is provided a call routing		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		apparatus for		
		facilitating		
		communications		
		between callers and		
		callees in a system		
		comprising a plurality		
		of nodes with which		
		callers and callees are		
		associated. The		
		apparatus includes		
		receiving provisions		
		for receiving a caller		
		identifier and a callee		
		identifier, in response		
		to initiation of a call by		
		a calling subscriber.		
		The apparatus also		
		includes classifying		
		provisions for		
		classifying the call as a		
		private network call or		
		a public network call		
		according to call		
		classification criteria		
		associated with the		
		caller identifier. The		
		apparatus further		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		includes provisions for producing a routing message identifying an address, on the private network, associated with the callee when the call is classified as a private network call. The apparatus also includes provisions for producing a routing message identifying a gateway to the public network when the call is classified as a public network call." '762 Patent at col. 3-4 ll. 61-10.		
		• The private network routing message producing provisions may be operably configured to produce a routing message having a callee identifier set according to a user name		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
		associated with the DID bank table record. '762 Patent at col. 5 ll. 18-21.				
		• The private network routing message producing provisions may be operably configured to determine whether a node associated with the reformatted callee identifier is the same as a node associated with the caller identifier. '762 Patent at col. 5 ll. 22-25.				
		The private network routing message producing provisions may be operably configured to perform at least one of the				
		following: forward the call to another party, block the call and				

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		direct the caller to a voicemail server associated with the callee, when the node associated with the caller is the same as the node associated with the callee. '762 Patent at col. 5 ll. 30-35.		
		The provisions for producing the private network routing message may be operably configured to produce a routing message having an identification of at least one of the callee identifier, an		
		identification of a party to whom the call should be forwarded and an identification of a voicemail server associated with the callee. '762 Patent at		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		 col. 5 ll. 42-47. The apparatus further includes provisions for communicating the routing message to a call controller. '762 Patent at col. 5 ll. 48-49. The provisions for producing a public network routing message identifying a gateway to the public network may include provisions for searching a database of route records associating route identifiers with dialing codes to find a route record having a dialing code having a number pattern matching at least a portion of the reformatted callee identifier. '762 Patent 		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		at col. 5 ll. 50-56. • "In accordance with another aspect of the invention, there is provided a data structure for access by an apparatus for producing a routing message for use by a call routing controller in a communications system. The data structure includes dialing profile records comprising fields for associating with respective subscribers to the system, a subscriber user name, direct-in-dial records comprising fields for associating with respective subscriber user name, direct-in-dial records comprising fields for associating with respective subscriber user names, a user domain and a direct-in-dial number, prefix to node records		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		comprising fields for		
		associating with at		
		least a portion of the		
		respective subscriber		
		user names, a node		
		address of a node in the		
		system, whereby a		
		subscriber name can be		
		used to find a user		
		domain, at least a		
		portion of the a		
		subscriber name can be		
		used to find a node		
		with which the		
		subscriber identified by		
		the subscriber name is		
		associated, and a user		
		domain and subscriber		
		name can be located in		
		response to a direct-in-		
		dial number." '762		
		Patent at col. 6 ll. 15-		
		32.		
		• "In accordance with		
		another aspect of the		
		invention, there is		
		provided a data		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		structure for access by		
		an apparatus for		
		producing a routing		
		message for use by a		
		call routing controller		
		in a communications		
		system. The data		
		structure includes		
		master list records		
		comprising fields for		
		associating a dialing		
		code with respective		
		master list identifiers		
		and supplier list		
		records inked to master		
		list records by the		
		master list identifiers,		
		said supplier list		
		records comprising		
		fields for associating		
		with a communications		
		services supplier, a		
		supplier ID, a master		
		list ID, a route		
		identifier and a billing		
		rate code, whereby		
		communications		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		services suppliers are associated with dialing codes, such that dialing codes can be used to locate suppliers capable of providing a communications link associated with a given dialing code." '762 Patent at col. 6 ll. 33-46. Brief Description of the Drawings: • "FIG. 15 is a tabular representation of a routing message transmitted from the RC to the call controller shown in		
		FIG. 1." '762 Patent at col. 11 ll. 45-47. • "FIG. 16 is a schematic representation of a		
		routing message buffer holding a routing message for		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		routing a call to the Calgary callee referenced in FIG. 11." '762 Patent at col. 11 ll. 48-50.		
		• "FIG. 25 is a schematic representation of a routing message, held in a routing message buffer, identifying to the controller a plurality of possible suppliers that may carry the call." '762 Patent at col. 12 ll. 1-4.		
		• "FIG. 32 is a schematic representation of an exemplary routing message , held in a routing message buffer, indicating call forwarding numbers and a voicemail server identifier" '762 Patent at col. 12 ll. 19-21.		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		• "Generally, the RC 16 executes a process to facilitate communication between callers and callees. The process involves, in response to initiation of a call by a calling subscriber, receiving a callee identifier from the calling subscriber, using call classification criteria associated with the calling subscriber to classify the call as a public network call or a private network call and producing a routing message identifying an address on the private network, associated with the callee when the call is		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		classified as a private network call and producing a routing message identifying a gateway to the public network when the call is classified as a public network call." '762 Patent at col. 14 l. 65 – col. 15 l. 9.		
		"The program memory 204 includes blocks of codes for directing the processor 202 to carry out various functions of the RC (16). One of these blocks includes an RC request message handler 250 which directs the RC to produce a routing		
		message in response to a received RC request message. The RC request message handler process is shown in greater detail		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
	Construction	at 250 in FIGS. 8A through 8D." '762 Patent at col. 18 ll. 19- 25. • Referring to FIG. 8A, block 280 directs the processor (202 of FIG. 7) to execute a process to determine whether or not the node associated with the reformatted callee identifier is the same node that is associated with the caller identifier. To do this, the processor 202 determines whether or not a prefix (e.g., continent code 61) of the callee name held in the callee ID buffer (211 in FIG. 7), is the same as the	Construction	
		corresponding prefix of the caller name held in		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		of the caller dialing		
		profile shown in FIG.		
		10. If the		
		corresponding prefixes		
		are not the same, block		
		302 in FIG. 8A directs		
		the processor (202 in		
		FIG. 7) to set a call		
		type flag in the buffer		
		memory (207 in FIG.		
		7) to indicate the call is		
		a cross-domain call.		
		Then, block 350 of		
		FIG. 8A directs the		
		processor (202 of FIG.		
		7) to produce a routing		
		message identifying an		
		address on the private		
		network with which the		
		callee identified by the		
		contents of the callee		
		ID buffer is associated		
		and to set a time to live		
		for the call at a		
		maximum value of		
		99999, for example.		
		'762 Patent at col. 21		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the	e
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹	

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		 II. 13-30. "Thus the routing message includes a caller identifier, a call identifier set according to a user name associated with the located DID bank table record and includes an identifier of a node on the private network with which the callee is associated." '762 Patent at col. 21 ll. 31-36. "Referring to FIG. 15, a generic routing message is shown 		
		generally at 352 and includes an optional supplier prefix field 354, and optional delimiter field 356, a callee user name field 358, at least one route field 360, a time to		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		live field 362 and		
		other fields 364. The		
		optional supplier		
		prefix field 354 holds		
		a code for identifying		
		supplier traffic. The		
		optional delimiter		
		field 356 holds a		
		symbol that delimits		
		the supplier prefix		
		code from the callee		
		user name field 358.		
		In this embodiment,		
		the symbol is a		
		number sign (#). The		
		route field 360 holds a		
		domain name or IP		
		address of a gateway		
		or node that is to		
		carry the call, and the		
		time to live field 362		
		holds a value		
		representing the		
		number of seconds		
		the call is permitted to		
		be active, based on		
		subscriber available		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		minutes and other billing parameters." '762 Patent at col. 21 ll. 49-62. • "Referring to FIG. 8A and FIG. 16, an example of a routing message produced by the processor at block 350 for a caller associated with a different node than the caller is shown generally at 366 and includes only a callee field 359, a route field 361 and a time to live field 362." '762 Patent at col. 21 ll. 63-67. • "Referring to FIG. 8A, having produced a routing message as shown in FIG. 16, block 381 directs the processor (202 of FIG. 7) to send the		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		routing message shown in FIG. 16 to the call controller 14 shown in FIG. 1." '762 Patent at col. 22 Il. 1-4. • "Referring back to FIG. 8D, block 560 directs the processor 202 of FIG. 7 to begin to produce a routing message of the type shown in FIG. 15. To do this, the processor 202 loads a routing message buffer as shown in FIG. 25 with a supplier prefix of the least costly supplier where the least costly supplier is determined from the rate fields 550 of FIG. 21 of the records associated with respective suppliers." '762 Patent at col. 25		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Il. 13-19. "Referring to FIGS. 22-24, in the embodiment shown, the supplier "Telus" has the lowest number in the rate field 550 and therefore the prefix 4973 associated with that supplier is loaded into the routing message buffer shown in FIG. 25 first." '762 Patent at col. 25 ll. 20-24. "Block 562 in FIG. 8D directs the processor to delimit the prefix 4973 by the number sign (#) and to next load the reformatted callee identifier into the routing message buffer shown in FIG. 25. At block 563 of FIG. 8D, the contents		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		of the route identifier		
		field 546 of FIG. 21		
		of the record		
		associated with the		
		supplier "Telus" are		
		added by the		
		processor 202 of FIG.		
		7 to the routing		
		message buffer		
		shown in FIG. 25		
		after an @ sign		
		delimiter, and then		
		block 564 in FIG. 8D		
		directs the processor		
		to get a time to live		
		value, which in one		
		embodiment may be		
		3600 seconds, for		
		example. Block 566		
		then directs the		
		processor 202 to load		
		this time to live value		
		and the timeout value		
		(551) in FIG. 21 in		
		the routing message		
		buffer of FIG. 25.		
		Accordingly, a first		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
	Construction	part of the routing message for the Telus gateway is shown generally at 570 in FIG. 25." '762 Patent at col. 25 ll. 25- 39. "Referring back to FIG. 8D, block 571 directs the processor 202 back to block 560 and causes it to repeat blocks 560, 562, 563, 564 and 566 for each successive supplier until the routing message buffer is loaded with information pertaining to each supplier identified by the processor at block	Construction	
		412. Thus, a second portion of the routing message as shown at 572 in FIG. 25 relates to the second supplier identified by the		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		record shown in FIG. 23. Referring back to FIG. 25, a third portion of the routing message as shown at 574 and is associated with a third supplier as indicated by the supplier record shown in FIG. 24." '762 Patent at col. 25 ll. 40-50. • "Consequently, referring to FIG. 25, the routing message buffer holds a routing message buffer holds a routing message identifying a plurality of different suppliers able to provide gateways to the public telephone network (i.e., specific routes) to establish at least part of a communication link through which the		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		callee. In this embodiment, each of the suppliers is identified, in succession, according to rate. Other criteria for determining the order in which suppliers are listed in the routing message may include preferred supplier priorities which may be established based on service agreements, for example." '762 Patent at col. 25 ll. 51-61. • "Referring to FIG. 8A and FIG. 27, block 608 directs the processor 202 of FIG. 7 to determine whether or not the caller identifier received in the RC request message matches a block pattern		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		stored in the block		
		pattern field 606 of the		
		call block record		
		associated with the		
		callee identified by the		
		contents of the user		
		name field 604 in FIG.		
		26. If the caller		
		identifier matches a		
		block pattern, block		
		610 directs the		
		processor to send a		
		drop call or non-		
		completion message to		
		the call controller (14)		
		and the process is		
		ended. If the caller		
		identifier does not		
		match a block pattern		
		associated with the		
		callee, block 609		
		directs the processor to		
		store the user name and		
		domain of the callee, as		
		determined from the		
		callee dialing profile,		
		and a time to live value		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		in the routing message		
		buffer as shown at 650		
		in FIG. 32. Referring		
		back to FIG. 8A, block		
		612 then directs the		
		processor 202 to		
		determine whether or		
		not call forwarding is		
		required." '762 Patent		
		at col. 26 ll. 20-35.		
		• "Referring to FIG. 8A		
		and FIG. 29, if at block		
		612, the call		
		forwarding record for		
		the callee identified by		
		the callee identifier		
		contains no contents in		
		the destination number		
		field 616 and		
		accordingly no		
		contents in the		
		sequence number field		
		618, there are no call		
		forwarding entries for		
		this callee, and the		
		processor 202 is		
		directed to block 620 in		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		FIG. 8C. If there are		
		entries in the call		
		forwarding table 27,		
		block 622 in FIG. 8A		
		directs the processor		
		202 to search the		
		dialing profile table to		
		find a dialing profile		
		record as shown in		
		FIG. 9, for the user		
		identified by the		
		destination number		
		field 616 of the call		
		forward record shown		
		in FIG. 28. The		
		processor 202 of FIG.		
		7 is further directed to		
		store the user name and		
		domain for that user		
		and a time to live value		
		in the routing message		
		buffer as shown at 652		
		in FIG. 32, to produce		
		a routing message as		
		illustrated. This		
		process is repeated for		
		each call forwarding		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

CI : FI .		'); and U.S. Patent No. 9,948,		D.C. J. (J.E.)
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		record associated with		
		the callee identified by		
		the callee ID buffer		
		211 in FIG. 7 to add to		
		the routing message		
		buffer all call		
		forwarding user names		
		and domains associated		
		with the callee." '762		
		Patent at col. 26-27 ll.		
		51-2.		
		• "Referring to FIG. 30,		
		voicemail records in		
		this embodiment may		
		include a user name		
		field 624, a voicemail		
		server field 626, a		
		seconds to voicemail		
		field 628 and an enable		
		field 630. The user		
		name field 624 stores		
		the user name of the		
		callee. The voicemail		
		server field 626 holds a		
		code identifying a		
		domain name of a		
		voicemail server		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		associated with the user		
		identified by the user		
		name field 624. The		
		seconds to voicemail		
		field 628 holds a code		
		identifying the time to		
		wait before engaging		
		voicemail, and the		
		enable field 630 holds		
		a code representing		
		whether or not		
		voicemail is enabled		
		for the user. Referring		
		back to FIG. 8C, at		
		block 620 if the		
		processor 202 of FIG.		
		7 finds a voicemail		
		record as shown in		
		FIG. 30 having user		
		name field 624		
		contents matching the		
		callee identifier, the		
		processor is directed to		
		examine the contents of		
		the enabled field 630 to		
		determine whether or		
		not voicemail is		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		enabled. If voicemail is		
		enabled, then block		
		640 in FIG. 8C directs		
		the processor 202 to		
		FIG. 7 to store the		
		contents of the		
		voicemail server field		
		626 and the contents of		
		the seconds to		
		voicemail field 628 in		
		the routing message		
		buffer, as shown at 654		
		in FIG. 32. Block 642		
		then directs the		
		processor 202 to get		
		time to live values for		
		each path specified by		
		the routing message		
		according to the cost of		
		routing and the user's		
		balance. These time to		
		live values are then		
		appended to		
		corresponding paths		
		already stored in the		
		routing message		
		buffer." '762 Patent at		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		col. 27 ll. 3-9.		
		Extrinsic evidence includes expected expert testimony. An expert is expected to offer the following opinions, based on their expertise, background and experience in the field of electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of the proposed constructions above:		
		1. One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		discipline. Such a person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work experience.		
		2. A person of ordinary skill in the art would have understood the claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		construction.		
		Extrinsic Evidence:		
		McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 1836).		
		"route, v" OED Online, Oxford University Press, 2019.		
"network external to the system"/ "external network"	a network that is distinct from and not controlled by the entity that controls the communication system	See '330 Patent Claims 1, 2, 8, 11-3, 16, 17, 24, 25, 29, 30. See '549 Patent Claims 1, 20, 10, 11, 17, 10, 22, 24	Indefinite	Fig. 1; 1:21-28 ("Referring to FIG. 1, a system for making voice over IP
('762 patent		3-8, 10, 14, 17, 19-22, 24, 26, 27.		is shown generally at 10.
claims 1, 21, 25;		See '002 Patent Claims 1-4, 7-15, 19, 23, 29, 30.		The system includes a firs supernode shown generall
'330 patent claims 1, 12, 13;		See '762 Patent Claims 1, 9, 21, 22, 25, 32, 43, 44.		at 11 and a second supernode shown generall at 21. The first
'002 patent claims 1, 12, 29;		• "1causing the at least one processor to access the at least one database to search for a user		supernode 11 is located in a geographical area, such as Vancouver, B.C., Canada for example and

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
'549 patent		profile for the second		the second supernode 21 is
claims 1, 6, 8,		participant; classifying		located in London,
17, 24)		the communication,		England, for example.
		based on the comparing,		Different supernodes may
		as a system		be located in different
		communication or an		geographical regions
		external network		throughout the world to
		communication, using the		provide
		at least one processor;		telephone/videophone
		when the communication		service to subscribers in
		is classified as a system		respective regions. These
		communication,		supernodes may be in
		producing a system		communication with each
		routing message		other by high speed/high
		identifying an Internet		data throughput links
		address of a		including optical fiber,
		communication system		satellite and/or cable links,
		node associated with the		forming a backbone to the
		second participant device		system. These supernodes
		based on the user profile		may alternatively or, in
		for the second participant,		addition, be in
		using the at least one		communication with each
		processor, wherein the		other through conventional
		system routing message		internet services.");
		causes the		,
		communication to be		1:58-62; 3:62-4:11; 13:20-
		established to the second		35; 13:55-66; 14:18-50;

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	49 (the "'549 patent") ¹		
VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
	participant device; and when the communication is classified as an external network communication, producing an external network routing message identifying an Internet address associated with a gateway to an external network, using the at least one processor, wherein the external network routing message causes the communication to the second participant device to be established using the gateway to the external network." '330 Patent at col. 37-38, Il. 40-4. • "2. The method of claim 1, wherein producing the system routing message causes the communication to		14:65-15:9; 17:58-63; 19:1-4; 19:36-48; 20:5-11; 21:1-12 ("the callee is a subscriber to the system and the call is classified as a private network call by directing the processor to block 279 which directs the processor to copy the contents of the corresponding user name field (281 in FIG. 14) from the callee DID bank table record 300 in FIG. 14) into the callee ID buffer (211 in FIG. 7)."); 25:51-61; 32:34-39 ("Referring back to FIG. 41, if at block 782 a record such as the one shown in FIG. 43is located in the system operator special rates table, the processor is directed to block 800 in FIG. 41. If such a record is not found in the system operator
		participant device; and when the communication is classified as an external network communication, producing an external network routing message identifying an Internet address associated with a gateway to an external network, using the at least one processor, wherein the external network routing message causes the communication to the second participant device to be established using the gateway to the external network." '330 Patent at col. 37-38, ll. 40-4. • "2. The method of claim 1, wherein producing the system	participant device; and when the communication is classified as an external network communication, producing an external network routing message identifying an Internet address associated with a gateway to an external network, using the at least one processor, wherein the external network routing message causes the communication to the second participant device to be established using the gateway to the external network." '330 Patent at col. 37-38, Il. 40-4. • "2. The method of claim 1, wherein producing the system routing message causes the communication to

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Internet protocol (IP) network; and wherein producing the external network routing message causes a portion of a path taken by the communication to be established over a circuit switched network." 330 Patent col. 38, Il. 5-9. • "8. The method of claim 1, further comprising: processing a plurality of communications from the first participant device to a plurality of communication recipient devices to classify each of the plurality of communications as a system communication or an external network communication, wherein the plurality of		special rates table, block 802 directs the processor to address the database 18 to look in a system operator mark-up table for a mark-up record associated with the reseller."); 23:23-38; 25:51-61; 32:34-39 ("Referring back to FIG. 41, if at block 782 a record such as the one shown in FIG. 43is located in the system operator special rates table, the processor is directed to block 800 in FIG. 41. If such a record is not found in the system operator special rates table, block 802 directs the processor to address the database 18 to look in a system operator mark-up table for a mark-up record associated with the

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the "'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent")¹

"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		communications are concurrent; and producing a respective plurality of routing messages, based on the classifying of each respective one of the plurality of communications, each respective routing message identifying an Internet address associated with a recipient device or identifying an Internet address associated with a gateway to an external network." 330 Patent, Col. 38, ll. 51-63. • "11. The method of claim 2, wherein the external network routing message comprises a code identifying a communication supplier		reseller."). Plaintiff's Opposition to Defendants' Motion to Dismiss (Dkt. No. 68) at 3 ("an external communication network (e.g., the public switched telephone networks or "PSTN")"); id. at 2 ("such as a system or internal network (e.g., voice-over IP) and an external network (e.g., a "circuit switched network" or public telephone communication network ('PTSN'))"); id. at 12 ("Internal routing in an IP network may rely on one or more communication nodes, whereas external destinations (e.g., on the PSTN) may only be accessible through a gateway."); id. at 14 ("system network (e.g.,

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	"'002 patent'	'); and U.S. Patent No. 9,948	,549 (the "'549 patent") ¹	
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		associated with the gateway to the external network." 330 Patent, Col. 39, Il. 5-8. • "12access the at least one database to search for a user profile for the second participant; classify the communication, based on the comparison result, as a system communication or an external network communication; when the communication is classified as a system communication, produce a system routing message identifying an Internet address of a communication system node associated with the second participant device based on the user profile for the		VoIP) or an external network (e.g., a PSTN interconnected through a gateway)"); id. at 15 (same).

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		second participant,		
		wherein the system		
		routing message causes		
		the communication to		
		be established to the		
		second participant		
		device; and when the		
		communication is		
		classified as an external		
		network		
		communication,		
		produce an external		
		network routing		
		message identifying an		
		Internet address		
		associated with a		
		gateway to an external		
		network, wherein the		
		external network		
		routing message causes		
		the communication to		
		the second participant		
		device to be established		
		using the gateway to		
		the external network."		
		330 Patent, Col. 39, ll.		
		33-52.		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		• "13. The apparatus of claim 12, wherein the at least one processor is operably configured to cause the communication to be established over an Internet protocol (IP) network when the communication is classified as a system communication; and wherein the at least one processor is operably configured to cause a portion of a path taken by the communication to be established over a circuit switched network when the communication is classified as an external network communication." 330 Patent, Col. 39, Il. 53-62.		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		claim 13, wherein the at		
		least one processor is		
		further operably		
		configured to: process a		
		plurality of		
		communications from		
		the first participant		
		device to a plurality of		
		communication		
		recipient devices to		
		classify each of the		
		plurality of		
		communications as a		
		system communication		
		or an external network		
		communication,		
		wherein the plurality of		
		communications are		
		concurrent; and		
		produce a respective		
		plurality of routing		
		messages, based on the		
		classifying of each		
		respective one of the		
		plurality of		
		communications, each		
		respective routing		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		message identifying an Internet address associated with a recipient device or identifying an Internet address associated with a gateway to an external network." 330 Patent, Col. 40, Il. 13-26.		
		• "17classify the communication, based on at least one of the comparison result and the communication blocking information for the second participant, as a system communication, an external network communication or a blocked communication; when the communication is classified as a system communication,		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		routing message		
		identifying a first		
		Internet address		
		associated with the		
		second participant		
		device, causing the		
		communication to be		
		established entirely		
		over an Internet		
		protocol (IP) network;		
		and when the		
		communication is		
		classified as an external		
		network		
		communication,		
		produce an external		
		routing message		
		identifying an Internet		
		address associated with		
		a gateway to a network		
		that is external to the		
		communication system,		
		causing a portion of a		
		path taken by the		
		communication to be		
		established over a		
		circuit switched		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed	"); and U.S. Patent No. 9,948, VoIP-Pal's Evidence	Defendants' Proposed	Defendants' Evidence
	Construction		Construction	
		network." 330 Patent, Col. 40-41, ll. 56-7.		
		• "24. The apparatus of claim 17, wherein the at least one processor is further operably configured to: determine whether the second participant device is operably configured to communicate via the Internet; and if the second participant device is not operably configured to communicate via the Internet, classify the Internet, classify the communication as the external network communication." 330 Patent, Col. 37-38, Il. 40-4.		
		• "25. The apparatus of claim 17, wherein the at least one processor is		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		further operably configured to: determine whether the user profile for the second participant exists in the at least one database; and if the user profile for the second participant does not exist in the at least one database, classify the communication as the external network communication." 330 Patent, Col. 41, Il. 57-63.		
		 '762 Patent Claims: network external to the system " a network external to the system" 762 Patent, Col. 38 at claim 1. " wherein the network external to 		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		the system is a circuit switched network" 762 Patent at claim 9. " the second network routing message identifying an address associated with a gateway to a network external to the system, wherein the second network classification criterion is met if the second participant is not registered with the system" 762 Patent at claim 21. " wherein the system comprises an IP network and the first participant device is in data communication with the IP network, wherein the first network routing message causes the		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		communication to take place entirely over the IP network, and wherein the network external to the system is a circuit switched network. '762 Patent at claim 25.		
		Background of the Invention		
		"IP telephony switches installed within the IP network enable voice calls to be made within or between an IP networks, and		
		between a IP network and a switched circuit network (SCN), such as the public switched telephone network (PSTN). '762 Patent at col. 1 ll. 29-35.		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		• "The PSTN network typically includes complex network nodes that contain all information about a local calling service area including user authentication and call routing. The PSTN network typically aggregates all information and traffic into a single location or node, processes it locally and then passes it on to other network nodes, as necessary, by maintaining route tables at the node." '762 Patent at col.1 ll. 36-42.		
		Invention • "In accordance with		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		one aspect of the		
		invention, there is		
		provided a process for		
		operating a call		
		routing controller to		
		facilitate		
		communication		
		between callers and		
		callees in a system		
		comprising a plurality		
		of nodes with which		
		callers and callees are		
		associated. The		
		process involves, in		
		response to initiation		
		of a call by a calling		
		subscriber, receiving a		
		caller identifier and a		
		callee identifier. The		
		process also involves		
		using call		
		classification criteria		
		associated with the		
		caller identifier to		
		classify the call as a		
		public network call		
		or a private network		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		call. The process further involves producing a routing message identifying an address, on the private network, associated with the callee when the call is classified as a private network call. The process also involves producing a routing message identifying a gateway to the public		
		network when the call is classified as a public network call ." '762 Patent at col.1 57 – col 2 l. 5. "The process may involve causing a database of records to be searched to locate a direct in dial (DID) bank table record associating a public telephone number		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the	e
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹	

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹						
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence			
		with the reformatted callee identifier and if the DID bank table record is found, classifying the call as a private network call and if a DID bank table record is not found, classifying the call as a public network call." 762					
		Patent at col.2 ll. 61-7. • "Producing a routing message identifying a gateway to the public network may involve searching a database of route records associating route identifiers with					
		dialing codes to find a route record having a dialing code having a number pattern matching at least a portion of the reformatted callee					

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		identifier." 762 Patent		
		at col. 3 ll. 33-8.		
		• Generally, the RC 16		
		executes a process to		
		facilitate		
		communication		
		between callers and		
		callees. The process		
		involves, in response to initiation of a call		
		by a calling		
		subscriber, receiving a		
		callee identifier from		
		the calling subscriber,		
		using call		
		classification criteria		
		associated with the		
		calling subscriber to		
		classify the call as a		
		public network call or		
		a private network call		
		and producing a		
		routing message		
		identifying an address		
		on the private		
		network, associated		
		with the callee when		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		the call is classified as a private network call and producing a routing message identifying a gateway to the public network when the call is classified as a public network call. '762 Patent at col. 14 l. 65 – col. 15 l. 9.		
		Extrinsic evidence includes expected expert testimony. An expert is expected to offer the following opinions, based on their expertise, background and experience in the field of electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of the proposed constructions above:		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		 One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related discipline. Such a person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work experience. A person of ordinary skill in the art would 		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction.		
		Extrinsic Evidence: McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 2092).		
		Webster's II New College Dictionary, 2005 (at p. 752).		
		Webster's II New College Dictionary, 2005 (at p. 1146).		
		"network, n. and adj." OED Online, Oxford University Press, 2019.		
		"system, n." OED Online,		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
		Oxford University Press, 2019.				
"external network communication" ('330 patent claims 1, 12, 13; '002 patent claims 1, 12; '549 patent claims 1, 6, 8, 17, 24)	communication utilizing an external network	See '330 Patent Claims 1, 8, 12, 13, 16, 17, 24, 25, 29, 30. See '549 Patent Claims 1, 4-8, 10, 14, 17, 20-22, 24, 26, 27. See '002 Patent Claims 1, 3, 4, 7-10, 12, 14, 15. Claims: • ""1receiving, by the at least one processor, a second participant identifier inputted by the first participant using the first participant using the first participant device to initiate a communication, the second participant identifier being associated with the second participant	Indefinite	Fig. 1; 1:21-28 ("Referring to FIG. 1, a system for making voice over IP telephone/videophone calls is shown generally at 10. The system includes a first supernode shown generally at 11 and a second supernode shown generally at 21. The first supernode 11 is located in a geographical area, such as Vancouver, B.C., Canada for example and the second supernode 21 is located in London, England, for example. Different supernodes may be located in different geographical regions throughout the world to provide telephone/videophone service to subscribers in respective regions. These		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		device; processing the		supernodes may be in
		second participant		communication with each
		identifier, based on the		other by high speed/high
		at least one first		data throughput links
		participant attribute		including optical fiber,
		obtained from the first		satellite and/or cable links,
		participant profile, to		forming a backbone to the
		produce a new second		system. These supernodes
		participant identifier;		may alternatively or, in
		classifying the		addition, be in
		communication as a		communication with each
		system communication		other through conventional
		or an external network		internet services.");
		communication; when		
		the communication is		13:20-35; 14:18-50; 14:65-
		classified as a system		15:9; 19:2-4;
		communication,		
		producing a system		21:1-12 ("the callee is a
		routing message, based		subscriber to the system
		on the new second		and the call is classified as
		participant identifier,		a private network call by
		that identifies an		directing the processor to
		Internet Protocol (IP)		block 279 which directs
		address of a network		the processor to copy the
		element through which		contents of the
		the communication is to		corresponding user name
		be routed thereby		field (281 in FIG. 14) from

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
		causing the		the callee DID bank table		
		communication to be		record 300 in FIG. 14) into		
		established to the		the callee ID buffer		
		second participant		(211 in FIG. 7)."); 25:51-		
		device; and when the		61; 32:34-39 ("Referring		
		communication is		back to FIG. 41, if at		
		classified as an		block 782 a record such as		
		external network		the one shown in FIG. 43is		
		communication,		located in the system		
		producing an external		operator special rates table,		
		network routing		the processor is directed to		
		message, based on the		block 800 in FIG. 41. If		
		new second participant		such a record is not found		
		identifier, that identifies		in the system operator		
		an address associated		special rates table,		
		with a gateway to an		block 802 directs the		
		external network		processor to address the		
		thereby causing the		database 18 to look in a		
		communication to the		system operator mark-up		
		second participant		table for a mark-up record		
		device to be established		associated with the		
		by use of the gateway		reseller.");		
		to the external				
		network." '549 Patent		Plaintiff's Opposition to		
		at claim 1.		Defendants' Motion to		
		• "4.The method of claim		Dismiss (Dkt. No. 68) at 3		
				("an external		
		1, wherein classifying				

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
		the communication comprises causing the at least one processor to: determine whether the second participant device is accessible to the communication system over an Internet Protocol (IP) network, and when the second participant device is not accessible over the Internet Protocol (IP) network, classify the communication as an external network communication." 549 Patent at claim 4. • "7. The method of claim 2, wherein classifying the communication further comprises causing the at least one processor to: determine whether a user profile associated with the new second		communication network (e.g., the public switched telephone networks or "PSTN")"); id. at 2 ("such as a system or internal network (e.g., voice-over IP) and an external network (e.g., a "circuit switched network" or public telephone communication network ('PTSN'))"); id. at 12 ("Internal routing in an IP network may rely on one or more communication nodes, whereas external destinations (e.g., on the PSTN) may only be accessible through a gateway."); id. at 14 ("system network (e.g., VoIP) or an external network (e.g., a PSTN interconnected through a gateway)"); id. at 15 (same).		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹						
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence			
		participant identifier					
		exists in the database; if					
		a user profile associated					
		with the new second					
		participant identifier					
		does not exist in the					
		database, classify the					
		communication as the					
		external network					
		communication; and if					
		a user profile associated					
		with the new second					
		participant identifier					
		exists in the database,					
		classify the					
		communication as the					
		system communication,					
		wherein the Internet					
		address associated with					
		the second participant					
		device is based on the					
		user profile associated					
		with the new second					
		participant identifier."					
		'002 Patent at claim 7.					
		• "8. The method of					
		claim 1, further					

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		comprising: processing		
		a plurality of		
		communications from		
		the first participant		
		device to a plurality of		
		communication		
		recipient devices to		
		classify each of the		
		plurality of		
		communications as a		
		system communication		
		or an external network		
		communication,		
		wherein the plurality of		
		communications are		
		concurrent; and		
		producing a respective		
		plurality of routing		
		messages, based on the		
		classifying of each		
		respective one of the		
		plurality of		
		communications, each		
		respective routing		
		message identifying an		
		Internet address		
		associated with a		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		recipient device or identifying an Internet address associated with a gateway to an external network. '002 Patent at claim 8. See also "external network."		
		Extrinsic evidence includes expected expert testimony. An expert is expected to offer the following opinions, based on their expertise, background and experience in the field of electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of the proposed constructions above:		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related discipline. Such a person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work experience.		
		2. A person of ordinary skill in the art would have understood the claim term, viewed in		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction.		
		Extrinsic Evidence:		
		Webster's II New College Dictionary, 2005 (at p. 233).		
		Webster's II New College Dictionary, 2005 (at p. 752).		
		McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 1415).		
		"communication, n." OED Online, Oxford University Press, 2019.		
		"network, n. and adj." OED Online, Oxford University Press, 2019.		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element VoIP-Pal's Proposed Construction VoIP-Pal's Evidence Construction Defendants' Proposed Construction Defendants' Evidence Construction Fig 8A, Figs. 26-27; 26:12-		"'002 patent	"); and U.S. Patent No. 9,948	3,549 (the "'549 patent") ¹	
"sammyricatic information used by a Sec '220 Potent Claims 5 Plain and ordinary Fig 8A, Figs. 26-27; 26:12-	Claim Element	-	VoIP-Pal's Evidence		Defendants' Evidence
n blocking information" ('330 patent claim 14; ''002 patent claim 12) See '002 Patent Claim 12. See '003 Patent Claim 12. See '004 Patent Claim 12. See '005 Patent Claim 12. See '005 Patent Claim 12. See '006 Patent Claim 12. See '006 Patent Claim 12. See '007 Patent Claim 12. See '008 Patent Claim 12. See '008 Patent Claim 12. See '009 Patent Claim 12. See	information" ('330 patent claim 14; '002 patent claim 26; '549 patent	communication system node to determine whether to prevent a communication from being received by the	See '549 Patent Claim 12. See '002 Patent Claim 26. See Figs. 26 & 27 Claims: • "5. The method of claim 2, further comprising: accessing the at least one database to locate communication blocking information for the second participant, using the at least one processor; and blocking the communication when the communication when the communication blocking information identifies the first participant identifier." '330 Patent at claim 5.	1	the call block records include a user name field 604 and a block pattern field 606. The user name field holds a user name corresponding to the user name in the user name field (258 in FIG. 10) of the callee profile and the block pattern field 606 holds one or more E. 164-compatible numbers or user names identifying PSTN numbers or system subscribers from whom the subscriber identified in the user name field 604 does not wish to receive calls. Referring to FIG. 8A and FIG. 27, block 608 directs the processor 202 of FIG. 7 to determine whether or

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		claim 11, wherein: if		received in the RC request
		the further		message matches a block
		communication is		pattern stored in the block
		allowed to proceed		pattern field 606 of the call
		based on the user-		block record associated
		specific first participant		with the callee identified
		attribute, causing the at		by the contents of the user
		least one processor to		name field 604 in FIG. 26.
		search a database for		If the caller identifier
		communication		matches a block pattern,
		blocking information		block 610 directs the
		associated with the		processor to send a drop
		third participant device,		call or non-completion
		and if the		message to the call
		communication		controller (14) and the
		blocking information is		process is ended.");
		found, preventing the		
		further communication		27:38-41.
		from being established;		
		and if the further		
		communication is		
		allowed to proceed		
		based on the at least		
		one user- specific first		
		participant attribute and		
		no communication		
		blocking information		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		associated with the third participant device is found in the database, causing the at least one processor to produce a corresponding routing message to cause the further communication to be established to the third participant device. '549 Patent at claim 12.		
		• "When the node associated with the caller is the same as the node associated with the callee, the process involves determining whether to perform at least one of the following: forward the call to another party, block the call and direct the caller to a voicemail server		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		associated with the callee." '330 Patent at col. 3 ll. 21-6.		
		• "The private network routing message producing provisions may be operably configured to perform at least one of the following forward the call to another party, block the call and direct the caller to a voicemail server associated with the callee, when the node associated with the caller is the same as the node associated with the callee" '330 Patent at col. 5 ll. 37-42.		
		Brief Description of the Drawings:		
		• "FIG. 26 is a tabular		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		representation of a call block table record;		
		• FIG. 27 is a tabular representation of a call block table record for the Calgary callee;" '330 Patent at col. 12 ll. 5-8.		
		 "In addition to creating dialing profiles as shown in FIG. 9 and DID records as shown in FIG. 13 when a user registers with the system, call blocking records of the type shown in FIG. 26, call forwarding records of the type shown in FIG. 28 and voicemail records of the type shown in FIG. 30 may 		

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		Construction	Defendants' Evidence
	database 18 when a new subscriber is added to the system." '330 Patent at col. 20 ll. 6- 12.		
	• "Referring back to FIG. 8A, if at block 280, the callee identifier received in the RC request message has a prefix that identifies the same node as that associated with the caller, block 600 directs the processor 202 to use the callee identifier in the callee id buffer 211 to locate and retrieve a dialing profile for the callee. The dialing profile may be of the type shown in FIG. 11 or 12, for example. Block 602 of FIG. 8A then directs the		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		forward and voicemail records from the database 18 of FIG. 1 based on the user name identified in the callee dialing profile retrieved by the processor at block 600. Call block, call forward and voicemail records may be as shown in FIGS. 26, 27, 28 and 30 for example.		
		Referring to FIG. 26, the call block records include a user name field 604 and a block pattern field 606. The user name field holds a user name corresponding to the user name in the user name field (258 in FIG. 10) of the callee profile and the block pattern field 606 holds one or		

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numbers or user names		
identifying PSTN numbers or system subscribers from whom the subscriber identified in the user name field 604 does not wish to receive calls.		
Referring to FIG. 8A and FIG. 27, block 608 directs the processor 202 of FIG. 7 to determine whether or not the caller identifier received in the RC request message matches a block		
pattern stored in the block pattern field 606 of the call block record associated with the callee identified by the contents of the user name field 604 in FIG. 26. If the caller		
	the subscriber identified in the user name field 604 does not wish to receive calls. Referring to FIG. 8A and FIG. 27, block 608 directs the processor 202 of FIG. 7 to determine whether or not the caller identifier received in the RC request message matches a block pattern stored in the block pattern field 606 of the call block record associated with the callee identified by the contents of the user name field 604 in FIG.	the subscriber identified in the user name field 604 does not wish to receive calls. Referring to FIG. 8A and FIG. 27, block 608 directs the processor 202 of FIG. 7 to determine whether or not the caller identifier received in the RC request message matches a block pattern stored in the block pattern field 606 of the call block record associated with the callee identified by the contents of the user name field 604 in FIG. 26. If the caller identifier matches a

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		610 directs the		
		processor to send a		
		drop call or non-		
		completion message to		
		the call controller (14)		
		and the process is		
		ended. If the caller		
		identifier does not		
		match a block pattern		
		associated with the		
		callee, block 609		
		directs the processor to		
		store the username and		
		domain of the callee, as		
		determined from the		
		callee dialing profile,		
		and a time to live value		
		in the routing message		
		buffer as shown at 650		
		in FIG. 32. Referring		
		back to FIG. 8A, block		
		612 then directs the		
		processor 202 to		
		determine whether or		
		not call forwarding is		
		required." '330 Patent		
		at col. 25 l. 63 – col. 26		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		1. 33.		
		• "Referring back to FIG. 8C, block 644 then directs the processor 202 of FIG. 7 to store the IP address of the current node in the routing message buffer as shown at 656 in FIG. 32. Block 646 then directs the processor 202 to send the routing message shown in FIG. 32 to the call controller 14 in FIG. 1. Thus in the embodiment described the routing controller will produce a routing message that will cause at least one of the following: forward the call to another party, block the call and direct the caller to a voicemail		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	"'002 patent'	"); and U.S. Patent No. 9,948	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence				
		col. 27 ll. 33-41. • "Referring to FIG. 34, a subscriber bundle table record is shown generally at 706. The record includes a user name field 708 and a services field 710. The user name field 708 holds a code identifying the subscriber user name and the services field 710 holds codes identifying service features assigned to the subscriber, such as free local calling, call blocking and voicemail, for example.	-					
		FIG. 35 shows an exemplary subscriber bundle record for the Vancouver caller. In this record the user name field 708 is loaded with the user						

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		name 2001 1050 8667		
		and the services field		
		710 is loaded with		
		codes 10, 14 and 16		
		corresponding to free		
		local calling, call		
		blocking and voicemail,		
		respectively. Thus, user		
		2001 1050 8667 has		
		free local calling, call		
		blocking and voicemail		
		features." '330 Patent at		
		col. 29 ll. 8-21.		
		Extrinsic evidence includes		
		expected expert testimony.		
		An expert is expected to		
		offer the following		
		opinions, based on their		
		expertise, background and		
		experience in the field of		
		electrical engineering,		
		knowledge of the		
		viewpoint of a person of		
		ordinary skill in the art,		
		review of the patents and		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		file histories, and review of the proposed constructions above:		
		1. One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related discipline. Such a person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent")					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
		experience. 2. A person of ordinary skill in the art would have understood the claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction.				
"internet address" ('330 patent claims 1, 3, 12; '002 patent claims 1, 12, 22, 29)	an address of a network element used in Internet Protocol (IP) communications	Claims: • "1classifying the communication, based on the new second participant identifier, as a system communication or an external network communication, using the at least one processor; when the communication is	Public IP Address	Fig. 1; Fig. 2; Fig. 15; Fig. 54; 13:55-63 (Subscribers such as a subscriber in Vancouver and a subscriber in Calgary communicate with the Vancouver Supernode using their own internet service providers which route internet traffic from		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		classified as a system communication, producing a system routing message identifying an Internet address associated with the second participant device, using the at least one processor, wherein the system routing message causes the communication to be established to the second participant device; and when the communication is classified as an external network communication, producing an external network routing message identifying an Internet address associated with a gateway to an external		these subscribers over the internet shown generally at 13 in FIG. 1. To these subscribers the Vancouver Supernode is accessible at a pre-determined internet protocol (IP) address"); 14:1-50 ("It should be noted that throughout the description of the embodiments of this invention, the IP/UDP addresses of all elements such as the caller and callee telephones, call controller, media relay, and any others, will be assumed to be valid IP/UDP addresses directly accessible via the Internet or a private IP network"); 15:35-40; 16:30-39; 21:57-59; 28:5-43; 35:45-47.

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		network, using the at least one processor, wherein the external network routing message causes the communication to the second participant device to be established using the gateway to the external network." '002 Patent at col. 37 1. 51 – col. 38 1. 2. '6. The method of claim 5, wherein the Internet address associated with the second participant device is based on the user profile associated with the new second participant identifier." '002 Patent at col. 38 Il. 33-6. '7. The method of claim 2, wherein classifying the		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		communication		
		further comprises		
		causing the at least		
		one processor to:		
		determine whether a		
		user profile associated		
		with the new second		
		participant identifier		
		exists in the database;		
		if a user profile		
		associated with the		
		new second		
		participant identifier		
		does not exist in the		
		database, classify the		
		communication as the		
		external network		
		communication; and		
		if a user profile		
		associated with the		
		new second		
		participant identifier		
		exists in the database,		
		classify the		
		communication as the		
		system		
		communication,		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		wherein the Internet address associated with the second participant device is based on the user profile associated with the new second participant identifier." '002 Patent at col. 38, Il. 37-52. • "8. The method of claim 1, further comprising: processing a plurality of communications from the first participant device to a plurality of communication recipient devices to classify each of the plurality of communications as a system communication or an external network		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		wherein the plurality		
		of communications		
		are concurrent; and		
		producing a		
		respective plurality of		
		routing messages,		
		based on the		
		classifying of each		
		respective one of the		
		plurality of		
		communications, each		
		respective routing		
		message identifying		
		an Internet address		
		associated with a		
		recipient device or		
		identifying an		
		Internet address		
		associated with a		
		gateway to an		
		external network."		
		002 Patent, col. 38, ll.		
		53-65.		
		• "10. The method of		
		claim 9, further		
		comprising:		
		processing a plurality		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		of communications		
		from the first		
		participant device to a		
		plurality of		
		communication		
		recipient devices to		
		classify each of the		
		plurality of		
		communications as a		
		system		
		communication or an		
		external network		
		communication,		
		wherein the plurality		
		of communications		
		are concurrent; and		
		producing a		
		respective plurality of		
		routing messages,		
		based on the		
		classifying of each		
		respective one of the		
		plurality of		
		communications, each		
		respective routing		
		message identifying		
		an Internet address		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		associated with a		
		recipient device or		
		identifying an		
		Internet address		
		associated with a		
		gateway to an		
		external network. 002		
		Patent, col. 39, ll. 51-		
		63.		
		• "11. The method of		
		claim 9, wherein		
		processing the second		
		participant identifier		
		comprises causing the		
		at least one processor		
		to modify the second		
		participant identifier,		
		based on at least one		
		of the plurality of first		
		participant attributes,		
		to produce the new		
		second participant		
		identifier; wherein		
		producing the system		
		routing message		
		comprises causing the		
		at least one processor		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		to determine the		
		Internet address		
		associated with the		
		second participant		
		device based on a		
		user profile for the		
		second participant;		
		and wherein		
		producing the		
		external network		
		routing message		
		comprises causing the		
		at least one processor		
		to select the Internet		
		address associated		
		with the gateway to		
		the external network		
		from among a		
		plurality of Internet		
		addresses associated		
		with a respective		
		plurality of gateways		
		to the external		
		network, and wherein		
		the external network		
		routing message		
		comprises a code		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		identifying a communication supplier associated with the gateway to the external network." 002 Patent, col. 39-40, ll. 64-16. • "16. The apparatus of claim 15, wherein the at least one processor is further operably configured to: if a user profile associated with the new second participant identifier exists in the database, classify the communication as the system communication, wherein the Internet address associated with the second participant device is determined based on the user profile associated with the		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		new second participant identifier." 002 Patent, col. 41, ll. 16-23. • "25. The method of claim 24, wherein the first communication system node is operably configured to establish the communication to the second participant device, the first communication system node being identified by a first Internet address, and wherein the second participant device is identified by a second Internet address distinct from the first Internet address; wherein a user profile for the second participant exists in the database		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		and is associated with		
		communication		
		forwarding		
		information		
		identifying at least		
		one destination device		
		other than the second		
		participant device for		
		the communication;		
		and wherein the first		
		communication		
		system node is		
		operably configured		
		to use the		
		communication		
		forwarding		
		information		
		associated with the		
		second participant to		
		establish the		
		communication to the		
		at least one		
		destination device		
		using at least one		
		Internet address that		
		is distinct from the		
		first and second		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Internet addresses."		
		002 Patent, col. 42, ll.		
		13-31.		
		• "30. The apparatus of		
		claim 12, wherein the		
		Internet address		
		associated with the		
		second participant		
		device comprises an		
		IP address or domain		
		name of a		
		communication		
		system node		
		associated with the		
		second participant		
		device, the		
		communication		
		system node being		
		one of a plurality of		
		communication		
		system nodes each		
		operably configured		
		to provide		
		communications		
		services to a plurality		
		of communication		
		system subscribers;		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		and wherein the Internet address associated with the gateway to the external network is selected from among a plurality of Internet addresses associated with a respective plurality of gateways to the external network." 002 Patent, col. 38, ll. 55-67.		
		Detailed Description: • "Subscribers such as a subscriber in Vancouver and a subscriber in Calgary communicate with the Vancouver supernode using their own internet service providers which route internet traffic from these subscribers over		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		generally at 13 in		
		FIG. To these		
		subscribers the		
		Vancouver supernode		
		is accessible at a pre-		
		determined internet		
		protocol (IP)		
		address or a fully		
		qualified domain		
		name that can be		
		accessed in the usual		
		way through a		
		subscriber's internet		
		service provider. The		
		subscriber in		
		Vancouver uses a		
		telephone 12 that is		
		capable of		
		communicating with		
		the Vancouver		
		supernode 11 using		
		Session Initiation		
		Protocol (SIP)		
		messages and the		
		Calgary subscriber		
		uses a similar		
		telephone 15, in		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Calgary AB.		
		It should be noted that throughout the description of the embodiments of this invention, the IP/UDP addresses of all elements such as the caller and callee telephones, call controller, media relay, and any others, will be assumed to be valid IP/UDP addresses directly accessible via the Internet or a private IP network, for example, depending on the specific implementation of the system. As such, it		
		will be assumed, for example, that the caller and callee		
		telephones will have		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		IP/UDP addresses		
		directly accessible by		
		the call controllers		
		and the media relays		
		on their respective		
		supernodes, and those		
		addresses will not be		
		obscured by Network		
		Address Translation		
		(NAT) or similar		
		mechanisms. In other		
		words, the IP/UDP		
		information contained		
		in SIP messages (for		
		example the SIP		
		Invite message or the		
		RC Request message		
		which will be		
		described below) will		
		match the IP/UDP		
		addresses of the IP		
		packets carrying these		
		SIP message.		
		It will be appreciated		
		that in many		
		situations, the IP		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		addresses assigned to		
		various elements of		
		the system may be in		
		a private IP address		
		space, and thus not		
		directly accessible		
		from other elements.		
		Furthermore, it will		
		also be appreciated		
		that NAT is		
		commonly used to		
		share a "public" IP		
		address between		
		multiple devices, for		
		example between		
		home PCs and IP		
		telephones sharing a		
		single Internet		
		connection.		
		For example, a home		
		PC may be assigned		
		an IP address such as		
		192.168.0.101 and a		
		Voice over IP		
		telephone may be		
		assigned an IP address		
		of 192.168.0.103.		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		These addresses are		
		located in so called		
		"non-routable" (IP)		
		address space and		
		cannot be accessed		
		directly from the		
		Internet. In order for		
		these devices to		
		communicate with		
		other computers		
		located on the		
		Internet, these IP		
		addresses have to be		
		converted into a		
		"public" IP address,		
		for example		
		24.10.10.123 assigned		
		by the Internet		
		Service Provider to		
		the subscriber, by a		
		device performing		
		NAT, typically a		
		home router. In		
		addition to translating		
		the IP addresses, NAT		
		typically also		
		translates UDP port		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		numbers, for example		
		an audio path		
		originating at a VoIP		
		telephone and using a		
		UDP port 12378 at its		
		private IP address,		
		may have been		
		translated to a UDP		
		port 23465 associated		
		with the public IP		
		address of the NAT		
		device. In other		
		words, when a packet		
		originating from the		
		above VoIP telephone		
		arrives at an Internet-		
		based supernode, the		
		source IP/UDP		
		address contained in		
		the IP packet header		
		will be		
		24.10.10.1:23465,		
		whereas the source		
		IP/UDP address		
		information contained		
		in the SIP message		
		inside this IP packet		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		will be		
		192.168.0.103:12378.		
		The mismatch in the		
		IP/UDP addresses		
		may cause a problem		
		for SIP-based VoIP		
		systems because, for		
		example, a supernode		
		will attempt to send		
		messages to a private address of a telephone		
		but the messages will		
		never get there." '330		
		Patent at col. 13 l. 55		
		- col. 14 l. 50.		
		• "The parameter		
		memory 38 has a user		
		name field 50, a		
		password field 52, an		
		IP address field 53		
		and a SIP proxy		
		address field 54, for		
		example. The user		
		name field 50 is		
		operable to hold a		
		user name, which in		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		this case is 2001 1050		
		8667. The user name		
		is assigned upon		
		subscription or		
		registration into the		
		system and, in this		
		embodiment, includes		
		a twelve digit number		
		having a continent		
		code 61, a country		
		code 63, a dealer code		
		70 and a unique		
		number code 74. The		
		continent code 61 is		
		comprised of the first		
		or left-most digit of		
		the user name in this		
		embodiment. The		
		country code 63 is		
		comprised of the next		
		three digits. The		
		dealer code 70 is		
		comprised of the next		
		four digits and the		
		unique number code		
		74 is comprised of the		
		last four digits. The		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		password field 52		
		holds a password of		
		up to 512 characters,		
		in this example. The		
		IP address field 53		
		stores an IP address		
		of the telephone,		
		which for this		
		explanation is		
		192.168.0.20. The		
		SIP proxy address		
		field 54 holds an IP		
		protocol compatible		
		proxy address which		
		may be provided to		
		the telephone through		
		the internet		
		connection 48 as part		
		of a registration		
		procedure.		
		The program		
		memory 34 stores		
		blocks of codes for		
		directing the		
		processor 32 to carry		
		out the functions of		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		the telephone, one of		
		which includes a		
		firewall block 56		
		which provides		
		firewall functions to		
		the telephone, to		
		prevent access by		
		unauthorized persons		
		to the microprocessor		
		32 and memories 34,		
		38 and 40 through		
		the internet		
		connection 48. The		
		program memory 34		
		also stores codes 57		
		for establishing a call		
		ID. The call ID codes		
		57 direct the		
		processor 32 to		
		produce a call		
		identifier having a		
		format comprising a		
		hexadecimal string at		
		an IP address , the IP		
		address being the IP		
		address of the		
		telephone. Thus, an		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		exemplary call identifier might be FF10@192.168.0.20.		
		Generally, in response to picking up the handset interface 46 and activating a dialing function 44, the microprocessor 32 produces and sends a SIP invite message as shown in FIG. 3, to the routing controller 16 shown in FIG. 1. This SIP invite message is essentially to initiate a call by a calling subscriber.		
		Referring to FIG. 3, the SIP invite message includes a caller ID field 60, a callee identifier field		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		62, a digest		
		parameters field 64,		
		a call ID field 65, an		
		IP address field 67		
		and a caller UDP		
		port field 69. In this		
		embodiment, the		
		caller ID field 60		
		includes the user		
		name 2001 1050		
		8667 that is the		
		Vancouver user		
		name stored in the		
		user name field 50 of		
		the parameter		
		memory 38 in the		
		telephone 12 shown		
		in FIG. 2. In		
		addition, referring		
		back to FIG. 3, the		
		callee identifier field		
		62 includes a callee		
		identifier which in		
		this embodiment is		
		the user name 2001		
		1050 2222 that is the		
		dialed number of the		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Calgary subscriber		
		stored in the dialed		
		number buffer 45		
		shown in FIG.		
		2. The digest		
		parameters field 64		
		includes digest		
		parameters and the		
		call ID field 65		
		includes a code		
		comprising a		
		generated prefix code		
		(FF10) and a suffix		
		which is the Internet		
		Protocol (IP)		
		address of the		
		telephone 12 stored		
		in the IP address field		
		53 of the telephone.		
		The IP address field		
		67 holds the IP		
		address assigned to		
		the telephone, in this		
		embodiment		
		192.168.0.20, and the		
		caller UDP port field		
		69 includes a UDP		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		port identifier identifying a UDP port at which the audio path will be terminated at the caller's telephone." '330 Patent at col. 15 1. 48 – col. 16 1. 39. • "If the authentication procedure is passed, block 121 directs the call controller circuit 100 to determine whether or not the contents of the caller ID field 60 of the SIP invite message received from the telephone is an IP address. If it is an IP address, then block 123 directs the call controller circuit 100 to set the contents of a type field variable		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		microprocessor 102		
		to a code representing that the call type is a		
		third party invite. If		
		at block 121 the		
		caller ID field		
		contents do not		
		identify an IP		
		address, then block		
		125 directs the		
		microprocessor to set		
		the contents of the		
		type field to a code		
		indicating that the		
		call is being made by		
		a system subscriber."		
		'330 Patent at col. 17		
		11. 31-51.		
		• "Then, block 350 of		
		FIG. 8A directs the		
		processor (202 of		
		FIG. 7) to produce a		
		routing message		
		identifying an address		
		on the private		
		network with which		
		the callee identified		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		by the contents of the		
		callee ID buffer is		
		associated and to set		
		a time to live for the		
		call at a maximum		
		value of 99999, for		
		example.		
		Thus the routing		
		message includes a		
		caller identifier, a		
		call identifier set		
		according to a user		
		name associated		
		with the located		
		DID bank table		
		record and includes		
		an identifier of a		
		node on the private		
		network with which		
		the callee is		
		associated.		
		The node in the		
		system with which		
		the callee is		
		associated is		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		determined by using		
		the callee identifier		
		to address a		
		supernode table		
		having records of the		
		type as shown at 370		
		in FIG. 17. Each		
		record 370 has a		
		prefix field 372 and		
		a supernode address		
		field 374. The prefix		
		field 372 includes		
		the first n digits of		
		the callee identifier.		
		In this embodiment		
		n=2. The supernode		
		address field 374		
		holds a code		
		representing the IP		
		address or a fully		
		qualified domain		
		name of the node		
		associated with the		
		code stored in the		
		callee identifier		
		prefix field 372.		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Referring to FIG. 18,		
		for example, if the		
		prefix is 20, the		
		supernode address		
		associated with that		
		prefix is		
		sp.yvr.digifonica.co		
		m		
		Referring to FIG. 15,		
		a generic routing		
		message is shown		
		generally at 352 and		
		includes an optional		
		supplier prefix field		
		354, and optional		
		delimiter field 356, a		
		callee user name		
		field 358, at least one		
		route field 360, a		
		time to live field 362		
		and other fields 364.		
		The optional supplier		
		prefix field 354 holds		
		a code for identifying		
		supplier traffic. The		
		optional delimiter		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		field 356 holds a		
		symbol that delimits		
		the supplier prefix		
		code from the callee		
		user name field		
		358. In this		
		embodiment, the		
		symbol is a number		
		sign (#). The route		
		field 360 holds a		
		domain name or IP		
		address of a		
		gateway or node that		
		is to carry the call,		
		and the time to live		
		field 362 holds a		
		value representing		
		the number of		
		seconds the call is		
		permitted to be		
		active, based on		
		subscriber available		
		minutes and other		
		billing parameters."		
		'330 Patent at col. 21		
		11. 24-60.		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		• "Referring to FIG. 21, a data structure for a supplier list record is shown. Supplier list records include a supplier ID field 540, a master list ID field 542, an optional prefix field 544, a specific route identifier field 546, a NDD/IDD rewrite field 548, a rate field 550, and a timeout field 551. The supplier ID field 540 holds a code identifying the name of the supplier and the master list ID field 542 holds a code for associating the supplier record with a master list record. The prefix field 544 holds a string used to identify the supplier		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		route identifier field		
		546 holds an IP		
		address of a gateway		
		operated by the		
		supplier indicated by		
		the supplier ID field		
		540." '330 Patent at		
		col. 24 ll. 51-62.		
		• "Referring back to		
		FIG. 8C, block 644		
		then directs the		
		processor 202 of FIG.		
		7 to store the IP		
		address of the current		
		node in the routing		
		message buffer as		
		shown at 656 in FIG.		
		32. Block 646 then		
		directs the processor		
		202 to send the		
		routing message		
		shown in FIG. 32 to		
		the call controller 14		
		in FIG. 1. Thus in the		
		embodiment described		
		the routing controller		
		will produce a routing		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		message that will		
		cause at least one of		
		the following: forward the call to another		
		party, block the call		
		and direct the caller to		
		a voicemail server.		
		'330 Patent at col. 24		
		Il. 51-62." '330 Patent		
		at col. 27 ll. 33-41.		
		Where a routing		
		message of the type		
		shown in FIG. 32 is		
		received by the call		
		controller 14, the		
		routing to gateway		
		routine 122 shown in		
		FIG. 4 may direct the		
		processor 102 to cause		
		a message to be sent		
		back through the		
		internet 13 shown in		
		FIG. 1 to the callee		
		telephone 15, knowing		
		the IP address of the		
		callee telephone 15		
		from the user name.		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
		 '330 Patent at col. 27 ll. 33-41. "If the routing message is of the type shown in FIG. 25 where there are a plurality of gateway suppliers available, the call controller sends a SIP invite message to the first supplier, in this case Telus, using a dedicated line or an internet connection to determine whether or not Telus is able to handle the call. If the Telus gateway returns a message indicating it is not able to handle 				
		the call, the call controller 14 then proceeds to send a SIP invite message to the next supplier, in this case Shaw. The process is repeated				

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		until one of the		
		suppliers responds		
		indicating that it is		
		available to carry the		
		call. Once a supplier		
		responds indicating		
		that it is able to carry		
		the call, the supplier		
		sends back to the call		
		controller 14 an IP		
		address for a gateway		
		provided by the		
		supplier through		
		which the call or audio		
		path of the call will be		
		carried. This IP		
		address is sent in a		
		message from the call		
		controller 14 to the		
		media relay 9 which		
		responds with a		
		message indicating an		
		IP address to which		
		the caller telephone		
		should send its		
		audio/video, traffic		
		and an IP address to		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		which the gateway should send its audio/video for the call. The call controller conveys the IP address at which the media relay expects to receive audio/video from the caller telephone, to the caller telephone 12 in a message. The caller telephone replies to the call controller with an IP address at which it would like to receive audio/video and the call controller conveys that IP address to the media relay. The call may then be conducted between the caller and callee through the media relay and		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Referring back to FIG.		
		1, if the call controller		
		14 receives a routing		
		message of the type		
		shown in FIG. 32, and		
		which has at least one		
		call forwarding		
		number and/or a		
		voicemail number, the		
		call controller		
		attempts to establish a		
		call to the callee		
		telephone 15 by		
		seeking from the		
		callee telephone a		
		message indicating an		
		IP address to which		
		the media relay should		
		send audio/video. If		
		no such message is		
		received from the		
		callee telephone, no		
		call is established. If		
		no call is established		
		within a pre-		
		determined time, the		
		call controller 14		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		attempts to establish a		
		call with the next user		
		identified in the call		
		routing message in the		
		same manner. This		
		process is repeated		
		until all call		
		forwarding		
		possibilities have been		
		exhausted, in which		
		case the call controller		
		communicates with		
		the voicemail server		
		19 identified in the		
		routing message to		
		obtain an IP address		
		to which the media		
		relay should send		
		audio/video and the		
		remainder of the		
		process mentioned		
		above for establishing		
		IP addresses at the		
		media relay 9 and the		
		caller telephone is		
		carried out to establish		
		audio/video paths to		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		allowing the caller to		
		leave a voicemail		
		message with the		
		voicemail server.		
		When an audio/video		
		path through the		
		media relay is		
		established, a call		
		timer maintained by		
		the call controller 14		
		logs the start date and		
		time of the call and		
		logs the call ID and an		
		identification of the		
		route (i.e., audio/video		
		path IP address) for		
		later use in billing." '330 Patent at col. 27		
		1. 62 – col. 28 l. 46.		
		Extrinsic evidence includes		
		expected expert testimony.		
		An expert is expected to		
		offer the following		
		opinions, based on their		
		expertise, background and		
		experience in the field of		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of external the proposed constructions above:		
		1. One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related discipline. Such a		
		person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		greater degree of formal education could serve to replace some degree of professional work experience.		
		2. A person of ordinary skill in the art would have understood the claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction.		
		Extrinsic Evidence: McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 36).		
		McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 1101).		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Webster's II New College Dictionary, 2005 (at p. 593). "address, n." OED Online, Oxford University Press, 2019. "Internet, n." OED Online, Oxford University Press, 2019.		
"first network classification criterion" / "second network classification criterion" / "third network classification criterion" ('762 patent claims 1, 2, 6, 21, 25, 26)	Plain and ordinary meaning. For example: a test used to classify a network communication.	See '762 Patent Claims 1, 19 21, 25, 41, 43. Claims: • "1. A method of routing communications in a system in which a first participant identifier is associated with a first participant registered with the system and wherein a second participant identifier is associated with a second participant, the first participant being	Indefinite	Abstract ("Call classification criteria associated with the caller identifier are used to classify the call as a public network call or a private network call."); 1:63-66 ("The process also involves using call classification criteria associated with the caller identifier to classify the call as a public network call or a private network call.");

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		associated with a first		2:9-11 ("Using the call
		participant device		classification criteria may
		operable to establish a		involve searching a
		communication using		database to locate a record
		the system to a second		identifying calling
		participant device		attributes associated with a
		associated with the		caller identified by the
		second participant, the		caller identifier.");
		system comprising at		
		least one processor		2:16-18 ("Using the call
		operably configured to		classification criteria may
		execute program code		involve comparing calling
		stored in at least one		attributes associated with
		memory, the method		the caller dialing profile
		comprising: in response		with aspects of the callee
		to the first participant		identifier.");
		device initiating the		
		communication to the		3:67-4:4 ("The apparatus
		second participant		also includes classifying
		device, receiving the		provisions for classifying
		first participant		the call as a private
		identifier and the		network call or a public
		second participant		network call according to
		identifier from the first		call classification criteria
		participant device;		associated with the caller
		using the first		identifier.");
		participant identifier to		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		locate, via the at least		14:66-15:4 ("The process
		one processor, a first		involves using call
		participant profile from		classification criteria
		among a plurality of		associated with the calling
		participant profiles that		subscriber to classify the
		are stored in a database,		call as a public network
		the first participant		call or a private network
		profile comprising one		call");
		or more attributes		
		associated with the first		23:40-42 ("Effectively,
		participant; processing		therefore blocks 257, 380,
		the second participant		390, 396 and 402 establish
		identifier, via the at		call classification criteria
		least one processor,		for classifying the call as a
		based on at least one of		public network call or a
		the one or more		private network call.");
		attributes from the first		,
		participant profile, to		23:42-45 ("Block 269
		produce a new second		classifies the call,
		participant identifier;		depending on whether or
		classifying the		not the formatted callee
		communication, via the		identifier has a DID bank
		at least one processor,		table record and this
		using the new second		depends on how the call
		participant identifier, as		classification criteria are
		a first network		met");
		communication if a		

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	"7002 patent	"); and U.S. Patent No. 9,948	549 (the "'549 patent") ¹	
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		first network		'762 patent cl. 1
		classification criterion		("classifying the
		is met and as a second		communication, via the at
		network		least one processor, using
		communication if a		the new second participant
		second network		identifier, as a first
		classification criterion		network communication if
		is met; when the first		a first network
		network classification		classification criterion is
		criterion is met,		met and as a second
		producing, via the at		network communication if
		least one processor, a		a second network
		first network routing		classification criterion is
		message, the first		met; when the first
		network routing		network classification
		message identifying an		criterion is met, producing,
		address in the system,		via the at least one
		the address being		processor, a first network
		associated with the		routing message, the first
		second participant		network routing message
		device; and when the		identifying an address in
		second network		the system, the address
		classification criterion		being associated with the
		is met, producing, via		second participant device;
		the at least one		and when the second
		processor, a second		network classification
		network routing		criterion is met, producing,

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	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		message, the second network routing message identifying an address associated with a gateway to a network external to the system, wherein the second network classification criterion is met if the second participant is not registered with the system." '762 Patent at claim 1. • 2. The method of claim 1, further comprising determining, based on at least one of the one or more attributes, whether a third network classification criterion is met, and when the third network classification criterion is met, producing an error message that prevents the communication		via the at least one processor, a second network routing message, the second network routing message identifying an address associated with a gateway to a network external to the system, wherein the second network classification criterion is met if the second participant is not registered with the system."); '762 patent cl. 2 ("The method of claim 1, further comprising determining, based on at least one of the one or more attributes, whether a third network classification criterion is met, and when the third network classification criterion is met, producing an error message that prevents the	

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		from being established. '762 Patent at claim 2.		communication from being established.");
		 '762 Patent at claim 2. 6. The method of claim 2, wherein if the third network classification criterion is met, the error message is sent to a call controller. 14. The method of claim 1, wherein the classifying comprises: causing a database of records to be searched with the new second participant identifier and determining whether the second participant is registered with the system. '762 Patent at claim 14. 15. The method of claim 14, wherein the 		'762 patent cl. 6 ("The method of claim 2, wherein if the third network classification criterion is met, the error message is sent to a call controller."); '762 patent cl. 21 ("when at least one of the one or more attributes and at least a portion of the second participant identifier meet a first network classification criterion, producing, via the at least one processor, a first network routing message, the first network routing message identifying an address in the system, the
		classifying further comprises: classifying the communication as the first network		address being associated with the second participant device; when at least one of the one or more

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		communication if a		attributes and at least a
		record is found in the		portion of the second
		database and		participant identifier meet
		classifying the		a second network
		communication as the		classification criterion,
		second network		producing, via the at least
		communication if the		one processor, a second
		record is not found in		network routing message,
		the database. '762		the second network routing
		Patent at claim 15.		message identifying an
		Detailed Descriptions:		address associated with a
		Detailed Descriptions.		gateway to a network
		• "Generally, the RC 16		external to the system,
		executes a process to		wherein the second
		facilitate		network classification
		communication		criterion is met if the
		between callers and		second participant is not
		callees. The process		registered with the system;
		involves, in response to		and when at least one of
		initiation of a call by a		the one or more attributes
		calling subscriber,		meets a third network
		receiving a callee		classification criterion,
		identifier from the		producing, via the at least
		calling subscriber,		one processor, an error
		using call classification		message and causing
		criteria associated with		prevention of the
		the calling subscriber to		communication from being

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		classify the call as a public network call or a private network call and producing a routing message identifying an address on the private network, associated with the callee when the call is classified as a private network call and producing a routing message identifying a gateway to the public network when the call is classified as a public network call." '762 Patent at col. 14 1. 65 – col. 15 1. 9. • "Referring back to FIG. 8A, after retrieving a dialing profile for the caller, such as shown at 276 in FIG. 10, the RC processor circuit 200 is directed to block 256 which directs the processor circuit (200)		established."); '762 patent cl. 25 ("classify the communication, using the new second participant identifier, as a first network communication if a first network classification criterion is met and as a second network communication if a second network classification criterion is met; produce a first network routing message when a first network classification criterion is met, the first network routing message identifying an address in the system, the address being associated with the second participant device; and produce a second network routing message when the second network	

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		to determine whether		classification criterion is
		the contents of the		met, the second network
		concurrent call field		routing message
		277 are less than the		identifying an address
		contents of the		associated with a gateway
		maximum concurrent		to a network external to the
		call field 275 of the		system, herein the second
		dialing profile for the		network classification
		caller and, if so, block		criterion is met if the
		271 directs the		second participant is not
		processor circuit to		registered with the
		increment the contents		system.");
		of the concurrent call		
		field 277. If the		'762 patent cl. 26 ("The
		contents of concurrent		system of claim 25,
		call field 277 are equal		wherein the at least one
		to or greater than the		processor is further
		contents of the		operably configured to
		maximum concurrent		determine, based on at
		call field 275, block		least one of the one or
		259 directs the		more attributes, if a third
		processor circuit 200 to		network classification
		<u>send an error message</u>		criterion is met, and when
		back to the call		the third network
		controller (14) to cause		classification criterion is
		the call controller to		met, the at least one
		notify the caller that the		processor is further

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		maximum number of concurrent calls has been reached and no further calls can exist concurrently, including the presently requested call." '762 Patent at col. 20 ll. 14-29.		operably configured to produce an error message that causes prevention of the communication from being established.").	
		• "Referring back to FIG. 8B, if at block 396, the callee identifier has a length that does not fall within the range specified by the caller minimum local number length field (268 in FIG. 10) and the caller maximum local number length field (270 in FIG. 10), block 402 directs the processor 202 of FIG. 7 to determine whether or not the callee identifier identifies a valid user name. To do this, the			

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		through the database (18 of FIG. 10) of dialing profiles to find a dialing profile having user name field contents (258 in FIG. 10) that match the callee identifier. If no match is found, block 404 directs the processor (202) to send an error message back to the call controller (14)." '762 Patent at col. 23 ll. 6-18. • "From FIG. 8B, it will be appreciated that there are certain groups of blocks of codes that direct the processor 202 in FIG. 7 to determine whether the callee identifier has certain features such as an international dialing digit, an area code and			

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		a length that meet		
		certain criteria, and		
		cause the processor 202		
		to reformat the callee		
		identifier stored in the		
		callee ID buffer 211, as		
		necessary into a		
		predetermined target		
		format including only a		
		country code, area		
		code, and a normal		
		telephone number, for		
		example, to cause the		
		callee identifier to be		
		compatible with the		
		E.164 number plan		
		standard in this		
		embodiment. This		
		enables block 269 in		
		FIG. 8B to have a		
		consistent format of		
		callee identifiers for use		
		in searching through the		
		DID bank table records		
		of the type shown in		
		FIG. 13 to determine		
		how to route calls for		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		subscriber to subscriber		
		calls on the same		
		system. Effectively,		
		therefore blocks 257,		
		380, 390, 396 and 402		
		establish call		
		classification criteria		
		for classifying the call		
		as a public network call		
		or a private network		
		call. Block 269		
		classifies the call,		
		depending on whether		
		or not the formatted		
		callee identifier has a		
		DID bank table record		
		and this depends on		
		how the call		
		classification criteria		
		are met and block 402		
		directs the processor		
		202 of FIG. 7 to		
		classify the call as a		
		private network call		
		when the callee		
		identifier complies		
		with a pre- defined		

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Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
	format, i.e., is a valid user name and identifies a subscriber to the private network, after the callee identifier has been subjected to the classification criteria of blocks 257, 380, 390 and 396. '762 Patent at col. 23 ll. 25-51.		
	• "Not all calls will be subscriber to subscriber calls and this will be detected by the processor 202 of FIG. 7 when it executes block 269 in FIG. 8B, and does not find a DID bank table record that is associated with the callee, in the DID bank table. When this occurs, the call is classified as a public		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		202 to block 408 of		
		FIG. 8B which causes it		
		to set the contents of		
		the callee ID buffer 211		
		of FIG. 7 equal to the		
		newly formatted callee		
		identifier, i.e., a number		
		compatible with the		
		E.164 standard. Then,		
		block 410 of FIG. 8B		
		directs the processor		
		(202) to search a		
		database of route or		
		master list records		
		associating route		
		identifiers with dialing		
		codes shown in FIG. 19		
		to locate a router		
		having a dialing code		
		having a number		
		pattern matching at		
		least a portion of the		
		reformatted callee		
		identifier." '762 Patent		
		at col. 23 ll. 53-67.		
		Extrinsic evidence includes		
		expected expert testimony.		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		An expert is expected to offer the following opinions, based on their expertise, background and experience in the field of electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of the proposed constructions above: 1. One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related discipline. Such a person would also have		
		two years of experience in system-level		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work experience.		
		2. A person of ordinary skill in the art would have understood the claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction.		
		Extrinsic Evidence:		

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	002 patent), and 0.5.1 atent 10.5,5 to,5 to (the 5 to patent)				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		of Scientific and Technical Terms, 2003 (at p. 1415).			
		Webster's II New College Dictionary, 2005 (at p. 212).			
		Webster's II New College Dictionary, 2005 (at p. 274)			
		Webster's II New College Dictionary, 2005 (at p. 752).			
		"network, n. and adj." OED Online, Oxford University Press, 2019.			
		"classification, n." OED Online, Oxford University Press, 2019.			
"call controller" ('762 patent claim 6)	apparatus that establishes a communication within a network or between networks	See '762 Patent Claim 6. See Figs. 4, 5, 6, 15, 51, 53.	an entity separate from the participant devices	'815 4/29/13 Remarks Made in an Amendment at 36-37 (explaining that a prior art's signal to a IP telephony device is distinct	
		Summary of the Invention:		from the patent's routing message to a call	

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	"'002 patent	"); and U.S. Patent No. 9,948	,549 (the "'549 patent") ¹	
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		 "The process may involve receiving a request to establish a call, from a call controller in communication with a caller identified by the callee identifier." '762 Patent at col. 2 ll. 6-8. "When the node associated with the caller is not the same as the node associated with the caller, the process involves producing a routing message including the caller identifier, the reformatted callee identifier and an identification of a private network node associated with the callee and communicating the routing message to a 		controller, emphasizing that a call controller is not the IP telephone, while also noting that the call controller and call routing controller are two different entities); '005 5/15/15 Reply to Non-Final Office Action at 29 ("Applicant respectfully submits call manager 26a in LAN 20a is not a call controller because that would mean that the call manager both produces and receives a private network routing message. There is no disclosure in Alexander that the call manager sends a private network routing message to itself. Therefore, Alexander's "call manager" does not and cannot correlate to the call controller recited in Claim 1.");

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	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		call controller." '762 Patent at col. 3 ll. 14-9. "The process may involve communicating a routing message involving the contents of the routing message buffer to a call controller." '762 Patent at col. 3 ll. 51-3. "The receiving provisions may be operably configured to receive a request to establish a call, from a call controller in communication with a caller identified by the callee identifier." '762 Patent at col. 4 ll. 11- 4. "The private network routing message producing provisions may be operably configured to produce a routing message including the caller		Fig. 1; 13:55-59; Fig 4; 16:40-50; 14:55-60 ("FIG. 51 is a tabular representation of a SIP bye message transmitted from either of the telephones shown in FIG. 1 to the call controller").	

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		identifier, the		
		reformatted callee		
		identifier and an		
		identification of a		
		private network node		
		associated with the		
		callee and to		
		communicate the		
		routing message to a		
		call controller." '762		
		Patent at col. 5 ll. 30-5.		
		Brief Description of the		
		Drawings:		
		• "FIG. 4 is a block		
		diagram of a call		
		controller shown in		
		FIG. 1." '762 Patent at		
		col. 11 ll. 16-7.		
		• "FIG. 5 is a flowchart		
		of a process executed		
		by the call controller		
		shown in FIG. 1" '762		
		Patent at col. 11 ll. 18-		
		9.		
		• "FIG. 6 is a schematic		

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Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		representation of a routing, billing and rating (RC) request message produced by the call controller shown in FIG. 1." '762 Patent at col. 11 ll. 20-2. • "FIG. 15 is a tabular representation of a routing message transmitted from the RC to the call controller shown in FIG. 1." '762 Patent at col. 11 ll. 45-7. • "FIG. 51 is a tabular representation of a SIP bye message transmitted from either of the telephones shown in FIG. 1 to the call controller." '762 Patent at col. 12 ll. 60-2. • "FIG. 53 is a flowchart of a process executed"		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		by the call controller		
		for producing an RC		
		stop message in		
		response to receipt of a		
		SIP bye message."		
		'762 Patent at col. 12		
		ll. 66-7.		
		Detailed Description:		
		• "It should be noted that		
		throughout the		
		description of the		
		embodiments of this		
		invention, the IP/UDP		
		addresses of all		
		elements such as the		
		caller and callee		
		telephones, call		
		controller, media relay,		
		and any others, will be		
		assumed to be valid		
		IP/UDP addresses		
		directly accessible via		
		the Internet or a private		
		IP network, for		
		example, depending on		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		the specific		
		implementation of the		
		system. As such, it will		
		be assumed, for		
		example, that the caller		
		and callee telephones		
		will have IP/UDP		
		addresses directly		
		accessible by the call		
		controllers and the		
		media relays on their		
		respective supernodes,		
		and those addresses		
		will not be obscured by		
		Network Address		
		Translation (NAT) or		
		similar mechanisms. In		
		other words, the		
		IP/UDP information		
		contained in SIP		
		messages (for example		
		the SIP Invite message		
		or the RC Request		
		message which will be		
		described below) will		
		match the IP/UDP		
		addresses of the IP		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		packets carrying these		
		SIP messages." '762		
		Patent at col. 14 ll. 1-		
		17.		
		• "Referring to FIG. 1, in		
		an attempt to make a		
		call by the Vancouver		
		telephone/videophone		
		12 to the Calgary		
		telephone/videophone		
		15, the Vancouver		
		telephone/videophone		
		sends a SIP invite		
		message to the		
		Vancouver supernode		
		11 and in response, the		
		call controller 14		
		sends an RC request		
		message to the RC 16		
		which makes various		
		enquiries of the		
		database 18 to produce		
		a routing message		
		which is sent back to		
		the call controller 14.		
		The call controller 14		
		then communicates		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	with the media relay 9 to cause a communications link including an audio path and a videophone (if a videopath call) to be established through the media relay to the same node, a different node or to a communications supplier gateway as shown generally at 20	
	communications link including an audio path and a videophone (if a videopath call) to be established through the media relay to the same node, a different node or to a communications supplier gateway as	
	including an audio path and a videophone (if a videopath call) to be established through the media relay to the same node, a different node or to a communications supplier gateway as	
	and a videophone (if a videopath call) to be established through the media relay to the same node, a different node or to a communications supplier gateway as	
	videopath call) to be established through the media relay to the same node, a different node or to a communications supplier gateway as	
	established through the media relay to the same node, a different node or to a communications supplier gateway as	
	media relay to the same node, a different node or to a communications supplier gateway as	
	node, a different node or to a communications supplier gateway as	
	or to a communications supplier gateway as	
	supplier gateway as	
	snown generally at 20 1	
	to carry audio, and	
	where applicable, video	
	traffic to the call	
	recipient or callee." '762 Patent at col. 14	
	ll. 51-64.	
	• "The processor 32 stores the callee	
	identifier in a dialled	
	number buffer 45. In	
	this case, assume the dialled number is 2001	
	1050 2222 and that it is	
	a number associated	
	with the Calgary	

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		subscriber. The I/O		
		port 36 also has a		
		handset interface 46 for		
		receiving and		
		producing signals from		
		and to a handset that		
		the user may place to		
		his ear. This interface		
		46 may include a		
		BLUETOOTH.TM.		
		wireless interface, a		
		wired interface or		
		speaker phone, for		
		example. The handset		
		acts as a termination		
		point for an audio path		
		(not shown) which will		
		be appreciated later.		
		The I/O port 36 also		
		has an internet		
		connection 48 which is		
		preferably a high speed		
		internet connection and		
		is operable to connect		
		the		
		telephone/videophone		
		to an internet service		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		provider. The internet		
		connection 48 also acts		
		as a part of the voice		
		path, as will be		
		appreciated later. It		
		will be appreciated that		
		where the subscriber		
		device is a videophone,		
		a separate video path is		
		established in the same		
		way an audio path is		
		established. For		
		simplicity, the		
		following description		
		refers to a telephone		
		call, but it is to be		
		understood that a		
		videophone call is		
		handled similarly, with		
		the call controller		
		causing the media relay		
		to facilitate both an		
		audio path and a video		
		path instead of only an		
		audio path." '762		
		Patent at col. 15 ll. 26-		
		47.		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		• "Referring to FIG. 4, a		
		call controller circuit		
		of the call controller 14		
		(FIG. 1) is shown in		
		greater detail at 100.		
		The call controller		
		circuit 100 includes a		
		microprocessor 102,		
		program memory 104		
		and an I/O port 106.		
		The circuit 100 may		
		include a plurality of		
		microprocessors, a		
		plurality of program		
		memories and a		
		plurality of I/O ports to		
		be able to handle a		
		large volume of calls.		
		However, for		
		simplicity, the call		
		controller circuit 100		
		will be described as		
		having only one		
		microprocessor 102,		
		program memory 104		
		and I/O port 106, it		
		being understood that		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		there may be more."		
		'762 Patent at col. 15		
		11. 41-50.		
		• "The program memory		
		104 includes blocks of		
		code for directing the		
		microprocessor 102 to		
		carry out various		
		functions of the call		
		controller 14. For		
		example, these blocks		
		of code include a first		
		block 120 for causing		
		the call controller		
		circuit 100 to execute a		
		SIP invite to RC		
		request process to		
		produce an RC request		
		message in response to		
		a received SIP invite		
		message. In addition,		
		there is a routing		
		message to gateway		
		message block 122		
		which causes the call		
		controller circuit 100		
		to produce a gateway		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		query message in response to a received routing message from the RC 16." '762 Patent at col. 17 ll. 6-15. • "Referring to FIG. 5, the SIP invite to RC request process is shown in more detail at 120. On receipt of a SIP invite message of the type shown in FIG. 3, block 122 of FIG. 5 directs the call controller circuit 100 of FIG. 4 to authenticate the user. This may be done, for example, by prompting the user for a password, by sending a message back to the telephone 12 which is interpreted at the telephone as a request for a password entry or the password		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		may automatically be		
		sent to the call		
		controller 14 from the		
		telephone, in response		
		to the message. The		
		call controller 14 may		
		then make enquiries of		
		databases to which it		
		has access, to		
		determine whether or		
		not the user's password		
		matches a password		
		stored in the database.		
		Various functions may		
		be used to pass		
		encryption keys or		
		hash codes back and		
		forth to ensure that the		
		transmittal of		
		passwords is secure."		
		'762 Patent at col. 17		
		11. 16-30.		
		• "Should the		
		authentication process		
		fail, the call controller		
		circuit 100 is directed		
		to an error handling		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		routine 124 which		
		causes messages to be		
		displayed at the		
		telephone 12 to		
		indicate there was an		
		authentication problem.		
		If the authentication		
		procedure is passed,		
		block 121 directs the		
		call controller circuit		
		100 to determine		
		whether or not the		
		contents of the caller		
		ID field 60 of the SIP		
		invite message		
		received from the		
		telephone is an IP		
		address. If it is an IP		
		address, then block 123		
		directs the call		
		controller circuit 100		
		to set the contents of a		
		type field variable		
		maintained by the		
		microprocessor 102 to		
		a code representing that		
		the call type is a third		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		party invite. If at block		
		121 the caller ID field		
		contents do not identify		
		an IP address, then		
		block 125 directs the		
		microprocessor to set		
		the contents of the type		
		field to a code		
		indicating that the call		
		is being made by a		
		system subscriber.		
		Then, block 126 directs		
		the call controller		
		circuit to read the call		
		identifier 65 provided		
		in the SIP invite		
		message from the		
		telephone 12, and at		
		block 128 the		
		processor is directed to		
		produce an RC request		
		message that includes		
		that call ID. Block 129		
		then directs the call		
		controller circuit 100		
		to send the RC request		
		to the RC 16." '762		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Patent at col. 17 ll. 31-51. • "The I/O port 208 includes a database request port 210 through which a request to the database (18 shown in FIG. 1) can be made and includes a database response port 212 for receiving a reply from the database 18. The I/O port 208 further includes an RC request message input 214 for receiving the RC request message from the call controller (14 shown in FIG. 1) and includes a routing message output 216 for sending a routing message back to the call controller 14 The I/O port 208 thus acts to receive caller		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		identifier and a callee		
		identifier contained in		
		the RC request		
		message from the call		
		controller, the RC		
		request message being		
		received in response to		
		initiation of a call by a		
		calling subscriber."		
		'762 Patent at col. 17,		
		11. 7-18.		
		"Referring back to		
		FIG. 8C, block 644		
		then directs the		
		processor 202 of FIG.		
		7 to store the IP		
		address of the current		
		node in the routing		
		message buffer as		
		shown at 656 in FIG.		
		32. Block 646 then		
		directs the processor		
		202 to send the routing		
		message shown in FIG.		
		32 to the call		
		controller 14 in FIG.		
		1. Thus in the		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		embodiment described the routing controller will produce a routing message that will cause at least one of the following: forward the call to another party, block the call and direct the caller to a voicemail server." '762 Patent at col. 27 ll. 35-47. • "Referring back to FIG. 1, the routing message whether of the type shown in FIG. 16, 25 or 32, is received at the call controller 14 and the call controller interprets the receipt of the routing message as a request to establish a call." '762 Patent at col. 27 ll. 44-7. • "Referring to FIG. 4, the program memory 104 of the call		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		controller 14 includes a routing to gateway routine depicted generally at 122." '762 Patent at col. 26 ll. 48-50. • "Where a routing message of the type shown in FIG. 32 is received by the call controller 14, the routing to gateway routine 122 shown in FIG. 4 may direct the processor 102 to cause a message to be sent back through the internet 13 shown in FIG. 1 to the callee telephone 15, knowing the IP address of the callee telephone 15 from the user name." '762 Patent at col. 27 ll. 51-6.		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		1		
		the type shown in FIG.		
		16, which identifies a		
		domain associated with		
		another node in the		
		system, the call		
		controller may send a		
		SIP invite message		
		along the high speed		
		backbone 17 connected		
		to the other node. The		
		other node functions as		
		explained above, in		
		response to receipt of a		
		SIP invite message."		
		'762 Patent at col. 27		
		11. 57-63.		
		• "If the routing message		
		is of the type shown in		
		FIG. 25 where there are		
		a plurality of gateway		
		suppliers available, the		
		call controller sends a		
		SIP invite message to		
		the first supplier, in		
		this case Telus, using a		
		dedicated line or an		
		internet connection to		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		determine whether or		
		not Telus is able to		
		handle the call. If the		
		Telus gateway returns a		
		message indicating it is		
		not able to handle the		
		call, the call controller		
		14 then proceeds to		
		send a SIP invite		
		message to the next		
		supplier, in this case		
		Shaw. The process is		
		repeated until one of		
		the suppliers responds		
		indicating that it is		
		available to carry the		
		call. Once a supplier		
		responds indicating		
		that it is able to carry		
		the call, the supplier		
		sends back to the call		
		controller 14 an IP		
		address for a gateway		
		provided by the		
		supplier through which		
		the call or audio path of		
		the call will be carried.		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		This IP address is sent		
		in a message from the		
		call controller 14 to		
		the media relay 9		
		which responds with a		
		message indicating an		
		IP address to which the		
		caller telephone should		
		send its audio/video,		
		traffic and an IP		
		address to which the		
		gateway should send		
		its audio/video for the		
		call. The call		
		controller conveys the		
		IP address at which the		
		media relay expects to		
		receive audio/video		
		from the caller		
		telephone, to the caller		
		telephone 12 in a		
		message. The caller		
		telephone replies to the		
		call controller with an		
		IP address at which it		
		would like to receive		
		audio/video and the		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		call controller conveys		
		that IP address to the		
		media relay. The call		
		may then be conducted		
		between the caller and		
		callee through the		
		media relay and		
		gateway. '762 Patent at		
		col. 27 1. 64 - col. 28 1.		
		23.		
		 "Referring back to 		
		FIG. 1, if the call		
		controller 14 receives		
		a routing message of		
		the type shown in FIG.		
		32, and which has at		
		least one call		
		forwarding number		
		and/or a voicemail		
		number, the call		
		controller attempts to		
		establish a call to the		
		callee telephone 15 by		
		seeking from the callee		
		telephone a message		
		indicating an IP		
		address to which the		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		media relay should		
		send audio/video. If no		
		such message is		
		received from the		
		callee telephone, no		
		call is established. If no		
		call is established		
		within a pre-		
		determined time, the		
		call controller 14		
		attempts to establish a		
		call with the next user		
		identified in the call		
		routing message in the		
		same manner. This		
		process is repeated		
		until all call forwarding		
		possibilities have been		
		exhausted, in which		
		case the call controller		
		communicates with the		
		voicemail server 19		
		identified in the routing		
		message to obtain an IP		
		address to which the		
		media relay should		
		send audio/video and		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		the remainder of the		
		process mentioned		
		above for establishing		
		IP addresses at the		
		media relay 9 and the		
		caller telephone is		
		carried out to establish		
		audio/video paths to		
		allowing the caller to		
		leave a voicemail		
		message with the		
		voicemail server." '762		
		Patent at col. 28 ll. 24-		
		43.		
		• "When an audio/video		
		path through the media		
		relay is established, a		
		call timer maintained		
		by the call controller		
		14 logs the start date		
		and time of the call and		
		logs the call ID and an		
		identification of the		
		route (i.e., audio/video		
		path IP address) for		
		later use in billing."		
		'762 Patent at col. 28		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		11. 44-8.		
		Extrinsic evidence includes expected expert testimony. An expert is expected to offer the following opinions, based on their expertise, background and experience in the field of electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of the proposed constructions above:		
		1. One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science,		
		Computer Engineering, Electrical Engineering,		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		or a closely related discipline. Such a person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work experience.		
		2. A person of ordinary skill in the art would have understood the claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	002 patent), and 0.5.1 atent 10. 333 15 (the 315 patent)				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		construction.			
		Extrinsic Evidence:			
		McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 169).			
		McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 480).			
		Webster's II New College Dictionary, 2005 (at p. 315).			
		"controller, n." OED Online, Oxford University Press, 2019.			
"communicatio	at least one network	See '330 Patent Claims 1,	Indefinite	Fig. 1; Fig. 13; Fig. 16;	
n system node"	element that is part of a communication system	3, 12, 18, 21, 28.		3:1-25 ("Producing the routing message	
('330 patent	and is associated with	See Fig. 1, 17, 18.		identifying a node on the	
claims 1, 3, 12)	providing	222 - 18. 1, 17, 10.		private network may	
	communication services	Background of the		involve setting a callee	
	to a plurality of	Invention:		identifier in response to a	
	subscribers of the			user name associated with	

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
	communication system	• "IP telephony switches installed within the IP network enable voice calls to be made within or between IP networks, and between an IP network and a switched circuit network (SCN), such as the public switched telephone network (PSTN). If the IP switch supports the Signaling System 7 (SS7) protocol, the IP telephone can also access PSTN databases." '330 Patent at col. 1 ll. 28-34.		Producing the routing message may involve determining whether a node associated with the reformatted callee identifier is the same as a node associated the caller identifier. Determining whether a node associated with the reformatted callee identifier is the same as a node associated with the reformatted callee identifier is the same as a node associated the caller identifier may involve determining whether a prefix of the reformatted callee identifier matches a corresponding prefix of a user name associated with	
		Summary of the Invention: • "In accordance with		the caller dialing profile.");	
		one aspect of the invention, there is		23:35-40.	
		provided a process for		Newton's	

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		operating a call routing controller to facilitate communication between callers and callees in a system comprising a plurality of nodes with which callers and callees are associated." '330 Patent at col. 1 ll. 56- 60. • "Producing the routing message identifying a node on the private network may involve setting a callee identifier in response to a username associated with the DID bank table record. Producing the routing message may involve determining whether a node associated with the reformatted callee identifier is the same as a node associated with		Telecommunications Dictionary 21st Edition at 587 (defining "node" as "A point of connection into a network In packet switched networks, it' one of the many packet switches which form the network's backbone."). Hargave's Communications Dictionary at 355 (defining "node" as "In networks, any device (such as a computer) connected to the network which is capable of communicating with other network devices. Each <i>node</i> has a unique address that identifies that device to all others on the network.")

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		the caller identifier.		
		Determining whether a node associated with the reformatted callee identifier is the same as a node associated the caller identifier may involve determining whether a prefix of the re-formatted callee identifier matches a corresponding prefix of a username associated with the caller dialing profile.		
		When the node associated with the caller is not the same as the node associated with the callee, the process involves producing a routing message including the caller identifier, the reformatted callee identifier and an		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the	e
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹	

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		identification of a private network node associated with the callee and communicating the routing message to a call controller.		
		When the node associated with the caller is the same as the node associated with the callee, the process involves determining whether to perform at least one of the following: forward the call to another party, block the call and direct the caller to a voicemail server associated with the callee." '330 Patent at col. 3 ll. 1-26.		
		"In accordance with another aspect of the invention, there is provided a call routing		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		apparatus for facilitating communications between callers and callees in a system comprising a plurality of nodes with which callers and callees are associated." '330 Patent at col. 3 ll. 62-66.		
		Brief Description of the Drawings: • "FIG. 1 is a block diagram of a system according to a first embodiment of the invention" '330 Patent at col. 11 ll. 9- 10.		
		• "FIG. 17 is a tabular representation of a prefix to supernode table record stored in the database shown in FIG. 1;		

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		• FIG. 18 is a tabular representation of a prefix to supernode table record that would be used for the Calgary callee referenced in FIG. 11;" '330 Patent at col. 11 ll. 51-5.		
		Detailed Description:		
		• "Referring to FIG. 1, a system for making voice over IP telephone/videophone calls is shown generally at 10. The system includes a first super node shown generally at 11 and a second super node shown generally at 21. The first super node 11 is located in geographical area, such as Vancouver, B.C.,		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		and the second super		
		node 21 is located in		
		London, England, for		
		example. Different		
		super nodes may be		
		located in different		
		geographical regions		
		throughout the world to		
		provide		
		telephone/videophone		
		service to subscribers in		
		respective regions.		
		These super nodes may		
		be in communication		
		with each other by high		
		speed/high data		
		throughput links		
		including optical fiber,		
		satellite and/or cable		
		links, forming a		
		backbone to the system.		
		These super nodes may		
		alternatively or, in		
		addition, be in		
		communication with		
		each other through		
		conventional internet		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		services." '330 Patent at col. 13 ll. 20-34.		
		• "A dialing profile of the type shown in FIG. 9 is produced whenever a user registers with the system or agrees to become a subscriber to the system. Thus, for example, a user wishing to subscribe to the system may contact an office maintained by a system operator and personnel in the office may ask the user certain questions about his location and service preferences, whereupon tables can be used to provide office personnel with appropriate information to be entered into the user name 258, domain 260, NDD 262, IDD 264, country code 266,		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		local area codes 267, caller minimum and maximum local length fields 268 and 270 reseller field 273 and concurrent call fields 275 and 277 to establish a dialing profile for the user." '330 Patent at col. 19 11. 37-49.		
		Extrinsic evidence includes expected expert testimony. An expert is expected to offer the following opinions, based on their expertise, background and experience in the field of electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of the proposed constructions		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

above: 1. One of ordinary skill in the art as of the priority		
<u> </u>		
date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related discipline. Such a person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work		
	person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree	person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		skill in the art would have understood the claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction.		
		Extrinsic Evidence: McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 1429).		
		McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 2092).		
		Webster's II New College Dictionary, 2005 (at p. 233).		
		Webster's II New College Dictionary, 2005 (at p. 1146).		
		"communication, n." OED		

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VoIP-Pal.com, Inc. v. Apple Inc.; VoIP-Pal.com, Inc. v. Amazon.com, Inc. United States District Court for the Northern District of California (Case Nos. 18-cv-6216-LHK and -7020-LHK)

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Online, Oxford University Press, 2019.		
		"node, n." OED Online, Oxford University Press, 2019.		
		"system, n." OED Online, Oxford University Press, 2019.		
"the classifying the communication is based on the causing the at least one processor to access the at least one database to search for the user profile for the second participant." ('330 patent claim 4)	Plain and ordinary meaning. For example: the step of: "classifying the communication" uses the result of the step of: "causing the at least one processor to access the at least one database to search for the user	Claims: • 4. The method of claim 1, wherein: (a) the causing the at least one processor to access the at least one database to search for the user profile for the second participant is based on the comparing at least a portion of the second participant identifier with the at least one of the plurality of first participant attributes; and (b) the classifying the communication is	Indefinite	Cites to the '330 Patent. Fig. 1, Fig. 7, Figs. 8A-D, Fig. 10, Fig. 14, and Fig. 19. 5:4-18 ("The classifying provisions may be operably configured to classify the call as a private network call when the reformatted callee identifier identifies a subscriber to the private network. The classifying provisions may be operably

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		based on the causing		configured to classify the	
		the at least one		call as a private network	
		processor to access the		call when the callee	
		at least one database		identifier complies with a	
		to search for the user		pre-defined username	
		profile for the second		format.	
		participant. '330			
		Patent at Claim 4.		The apparatus may further	
		Detailed Description:		include searching	
		Detailed Description.		provisions for searching a	
		• "Referring back to FIG.		database of records to	
		8A, if at block 280, the		locate a direct in dial	
		callee identifier		(DID) bank table record	
		received in the RC		associating a public	
		request message has a		telephone number with the	
		prefix that identifies the		reformatted callee	
		same node as that		identifier and the	
		associated with the		classifying provisions may	
		caller, block 600 directs		be operably configured to	
		the processor 202 to use		classify the call as a private	
		the callee identifier in		network call when the DID	
		the callee id buffer 211		bank table record is found	
		to locate and retrieve a		and to classify the call as a	
		dialing profile for the		public network call when a	
		callee. The dialing		DID bank table record is	
		profile may be of the		not found.");	
		type shown in FIG. 11			

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	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		or 12, for example. Block 602 of FIG. 8A then directs the processor 202 of FIG. 7 to get call block, call forward and voicemail records from the database 18 of FIG. 1 based on the user		14:51-64 ("Referring to FIG. 1, in an attempt to make a call by the Vancouver telephone/videophone 12 to the Calgary telephone/videophone 15, the Vancouver telephone/videophone	
		name identified in the callee dialing profile retrieved by the processor at block 600. Call block, call forward and voicemail records may be as shown in FIGS. 26, 27, 28 and 30 for example." '330 Patent at col. 25 1. 63 – col, 26 1. 8.		sends a SIP invite message to the Vancouver supernode 11 and in response, the call controller 14 sends an RC request message to the RC 16 which makes various enquiries of the database 18 to produce a routing message which is sent back to the call controller 14.	
		• "Referring back to FIG. 8B, if at block 396, the callee identifier has a length that does not fall within the range specified by the caller minimum local number		The call controller 14 then communicates with the media relay 9 to cause a communications link including an audio path and a videophone (if a videopath call) to be	

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_	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		length field (268 in		established through the	
		FIG. 10) and the caller		media relay to the same	
		maximum local number		node, a different node or to	
		length field (270 in		a communications supplier	
		FIG. 10), block 402		gateway as shown	
		directs the processor		generally at 20 to carry	
		202 of FIG. 7 to		audio, and where	
		determine whether or		applicable, video traffic to	
		not the callee identifier		the call recipient or	
		identifies a valid user		callee.");	
		name. To do this, the			
		processor 202		20:60-21:10 ("Still	
		searches through the		referring to FIG. 8B, if the	
		database (18 of FIG.		length of the amended	
		10 of dialing profiles		callee identifier meets the	
		to find a dialing		criteria set forth at block	
		profile having user		263, block 269 directs the	
		name field contents		processor (202 of FIG. 7)	
		(258 in FIG. 10) that		to make a database request	
		match the callee		to determine whether or	
		identifier. If no match		not the amended callee	
		is found, block 404		identifier is found in a	
		directs the processor		record in the direct-in-dial	
		(202) to send an error		bank (DID) table.	
		message back to the		Referring back to FIG. 8B,	
		call controller (14). If at		at block 269, if the	
		block 402, a dialing		processor 202 receives a	

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	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
		profile having a user name field 258 that matches the callee identifier is found, block 406 directs the processor 202 to set the call type flag to indicate that the call is a private network call and then the processor is directed to block 280 of FIG. 8A. Thus, the call is classified as a private network call when the callee identifier identifies a subscriber to the private network." '330 Patent at col. 25 ll. 4-22. • "Not all calls will be subscriber to subscriber calls and this will be detected by the processor 202 of FIG. 7 when it executes block 269 in FIG. 8B, and does not find a DID		response from the database indicating that the reformatted callee identifier produced at block 261 is found in a record in the DID bank table, then the callee is a subscriber to the system and the call is classified as a private network call by directing the processor to block 279 which directs the processor to copy the contents of the corresponding user name field (281 in FIG. 14) from the callee DID bank table record (300 in FIG. 14) into the callee ID buffer (211 in FIG. 7). Thus, the processor 202 locates a subscriber user name associated with the reformatted callee identifier. The processor 202 is then directed to		

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		bank table record that is associated with the callee, in the DID bank table. When this occurs, the call is classified as a public network call by directing the processor 202 to block 408 of FIG." '330 Patent at col. 23 ll. 51-9. Extrinsic evidence includes expected expert testimony. An expert is expected to offer the following opinions, based on their expertise, background and experience in the field of electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of the proposed constructions above:		point B in FIG. 8A."); 23:4-22 ("Referring back to FIG. 8B, if at block 396, the callee identifier has a length that does not fall within the range specified by the caller minimum local number length field (268 in FIG. 10) and the caller maximum local number length field (270 in FIG. 10), block 402 directs the processor 202 of FIG. 7 to determine whether or not the callee identifier identifies a valid user name. To do this, the processor 202 searches through the database (18 of FIG. 10 of dialing profile having user name field contents (258 in FIG. 10) that match the callee identifier. If no match is found, block 404 directs

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		 One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related discipline. Such a person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work experience. A person of ordinary skill in the art would have understood the 		the processor (202) to send an error message back to the call controller is (14). If at block 402, a dialing profile having a user name field 258 that matches the callee identifier is found, block 406 directs the processor 202 to set the call type flag to indicate that the call is a private network call and then the processor is directed to block 280 of FIG. 8A. Thus, the call is classified as a private network call when the callee identifier identifies a subscriber to the private network."); 23:51-65 ("Not all calls will be subscriber to subscriber calls and this will be detected by the processor 202 of FIG. 7 when it executes block 269 in FIG. 8B, and does not	

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	"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence		
	Construction	claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction. Extrinsic Evidence: Webster's II New College Dictionary, 2005 (at p. 212). Webster's II New College Dictionary, 2005 (at p. 233). Webster's II New College Dictionary, 2005 (at p. 233).	Construction	find a DID bank table record that is associated with the callee, in the DID\ bank table. When this occurs, the call is classified as a public network call by directing the processor 202 to block 408 of FIG. 8B which causes it to set the contents of the callee id buffer 211 of FIG. 7 equal to the newly formatted callee identifier, i.e., a number compatible with the E.164 standard. Then, block 410 of FIG. 8B directs the processor (202) to search a database of route or master list records associating route identifiers with dialing codes shown in FIG. 19 to		
		Webster's II New College Dictionary, 2005 (at p. 902).		locate a router having a dialing code having a number pattern matching at least a portion of the		
		McGraw-Hill Dictionary		reformatted callee		

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
		of Scientific and Technical Terms, 2003 (at p. 403). McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 1676). McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 2235). "classify, v." OED Online, Oxford University Press, 2019. "communication, n." OED Online, Oxford University Press, 2019. "participant, adj. and n." OED Online, Oxford University Press, 2019. "profile, n." OED Online, Oxford University Press, 2019. "user, n.1." OED Online, Oxford University Press, 2019.		identifier."); '330 Patent cl. 4 ("The method of claim 1, wherein: (a) the causing the at least one processor to access the at least one database to search for the user profile for the second participant is based on the comparing at least a portion of the second participant identifier with the at least one of the plurality of first participant attributes; and (b) the classifying the communication is based on the causing the at least one processor to access the at least one database to search for the user profile for the second participant.").	

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "549 patent")					
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence	
second participant identifier" t	Plain and ordinary meaning. taking a series of actions or operations with respect to the second participant identifier	Extrinsic evidence includes expected expert testimony. An expert is expected to offer the following opinions, based on their expertise, background and experience in the field of electrical engineering, knowledge of the viewpoint of a person of ordinary skill in the art, review of the patents and file histories, and review of the proposed constructions above: 1. One of ordinary skill in the art as of the priority date would be someone with an undergraduate degree in either Computer Science, Computer Engineering, Electrical Engineering, or a closely related	formatting the second participant identifier	Fig. 8B; 2:32-67 ("Formatting may involve removing an international dialing digit from the callee identifier, when the callee identifier begins with a digit matching an international dialing digit specified by the caller dialing profile associated with the caller. Formatting may involve removing a national dialing digit from the callee identifier and prepending a caller country code to the callee identifier when the callee identifier begins with a national dialing digit. Formatting may involve prepending a caller country code to the callee identifier when the callee identifier when the callee identifier when the callee identifier begins with digits identifying an area code specified by the caller	

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		person would also have two years of experience in system-level software development. A greater degree of professional experience could serve to replace some degree of formal education and some greater degree of formal education could serve to replace some degree of professional work experience. 2. A person of ordinary skill in the art would have understood the claim term, viewed in light of the subject patent(s) including the intrinsic evidence identified herein, to have the meanings consistent with the proposed claim construction.		dialing profile. Formatting may involve prepending a caller country code and an area code to the callee identifier when the callee identifier has a length that matches a caller dialing number format specified by the caller dialing profile and only one area code is specified as being associated with the caller in the caller dialing profile. The process may involve classifying the call as a private network call when the reformatted callee identifier identifies a subscriber to the private network. The process may involve determining whether the callee identifier complies with a pre-defined user name format and if so, classifying the call as a private network call.

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"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹				
Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
		Extrinsic Evidence: McGraw-Hill Dictionary of Scientific and Technical Terms, 2003 (at p. 1676). Webster's II New College Dictionary, 2005 (at p. 820). Webster's II New College Dictionary, 2005 (at p. 902). "participant, adj. and n." OED Online, Oxford University Press, 2019.		The process may involve causing a database of records to be searched to locate a direct in dial (DID) bank table record associating a public telephone number with the reformatted callee identifier and if the DID bank table record is found, classifying the call as a private network call and if a DID bank table record is not found, classifying the call as a public network call."); 3:5-50 ("Determining whether a node associated with the reformatted callee identifier is the same as a node associated the caller identifier may involve determining whether a prefix of the reformatted callee identifier matches a corresponding prefix of a

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U.S. Patent No. 9,537,762 (the "'762 patent"); U.S. Patent No. 9,813,330 (the "'330 patent"); U.S. Patent No. 9,826,002 (the
"'002 patent"); and U.S. Patent No. 9,948,549 (the "'549 patent") ¹

Claim Element	VoIP-Pal's Proposed Construction	VoIP-Pal's Evidence	Defendants' Proposed Construction	Defendants' Evidence
				user name associated with the caller dialing profile ");
				4:48-5:35; 5:50-6:3; 20:35- 21:31; 22:16-23:51; 24:31- 44; 25:25-39.